THE COSMOPOLITAN.

From every man according to his ability: to every one according to his need.

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R IMINI, like so many other ancient towns of Europe, has descended from her high estate and dethroned the remains of her classic and medieval greatness, to replace them by the trivial, cheap, and vulgar attributes of modern life. She has her Piazza Cavour and her Via Umberto, her cafés, and her restaurants, her omnibuses and her tramways, and her velocipede-matches, and all the rest of the ugly and tawdry life which accompanies these things.

In the oldentime, in the mighty days of republican and Cæsarean Rome, she was one of the five maritime towns of the eastern coast (pentopolis maritima), and, after Ancona, was chief amongst them. favorable to commerce and useful in in early spring or in late autumn. In war, and the Flaminian road passed under her walls; her old name in those days bastard Latin" which followed the decay veningen or the Étretat; but, be it which of the empire, into Rimini. She has a it may, in summer she is a modern seabrilliant medley of many memories sin- side resort, and every one knows what

with St. Anthony of Padua, the listening legions by the listening fishes, the triumphal arch of Augustus beside the bronze statue of Pope Paul, the Emilian and Flaminian ways by the mule-path which leads to Camaldoli, the medallion of Jupiter by the pietà of Gian Bellini. Here is the prison in which Cagliostro died; here is the altar which the Veronese painted; here flows the Ariminus of Strabo; and yonder the Crustumius rapax of Lucan: here the cohorts have tramped. and here the saints have preached; here Venus was adored, and here the English Hawkwood ravaged, and burned, and

It is best for the traveler, who is also Her position, on two rivers, rendered her a scholar, or an artist, to go to Rimini the months of summer she is the Margate or the Asnières of Italy; perwas Ariminum, worn down by the "soft haps she would call herself the Schegularly varied and opposed to each other: that means in this day, for, great purifier the Cæsar of the Rubicon side by side though the sea is, it has no power to

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out of modern life.

In summer, Rimini is full of holiday crowds, of the rattle of vehicles and bicycles, of the smell of frying mullets and stewing cabbage, of the screams of beaten mules, and stabbed pigs, and scalded lobsters, of the chatter, and noise, and twanging of guitars, and braying of cornets, and all the customary clamor and foolishness of a seaside resort, even though the sea is at some little distance from her. But in early spring, and in late autumn, all this alien and desecrating life has rolled away from her gates, in the railway trains which go northward to Bologna and Venice, or southward to Florence and Rome.

There is, in the spring or the winter, nothing human moving in her save the priests in her churches, the keepers of her little shops, her children selling shells or munching mussels, her fishermen going to their gaily-painted, madonna-dedicated sailing-boats, and her well-built women, carrying on their heads water-pitchers, unaltered in shape since Cæsar's soldiers slaked their thirst at them. And at such a season, either in March, when the narcissus poeticus blooms by what was once the Rubicon, or in late October, when the pale yellow of the false snapdragon covers the fields which were once trodden by the sandaled feet of St. Antonio. Rimini is in some things the city of the

> Cæsars, and the city of the Malatesta.

the great temand hero, Sig-

purge the vulgarity and offensive folly atesta. To Rimini, the Cæsars are not much, St. Anthony is more, and the Malatesta are most of all. This is but natural.

> In the great Latin days she was, indeed, an important municipality; and she seems to have been always favored and distinguished by Rome. But she was only one amongst many such towns then: whereas, under the Malatesta, she enjoyed a marked individuality. At no period in the world's history have small towns enjoyed so strong an idiosyncrasy, so intense personal physiognomy, as did these smaller towns of Italy under their medieval tyrants. Each of them sufficed to itself. Each differed in a thousand ways from its neighbors. Each had its arms, its arts, its architecture, its local color, its hereditary hatreds, its ardent, if narrow, patriotism, which were its own, and differed from those of its aliens and enemies.

And in the Malatesta, Rimini found her ruling race, her Medici, her Uguccione, her Castracani, her Este, her Scala, her Gonzaga. There must have been bitter hatred and humiliation in the heart of Rimini, it is true, when the Emperor Otho gave her to the first Malatesta, bound hand and foot like some slave-girl sold on the quays of that Venice to which the last Malatesta was destined basely to sell her. But the three hundred years of the Malatesta rule are now, despite all this, her chief glory, romance, and heroism, and she has identified herself with them, and sees in the mausoleum of saints, still; Sigismund the tomb of her own greatand is, in ness. Yet she has been disloyal enough much more, even to their shade, and untrue enough the city of the to herself, to build a brand-new, staring, intrusive theater close to the old Rimini still pile which was once the Malatesta palstands upon ace, and on which there may be traced her twin their sculptured emblems, the elephant streams, that and the rose; a curious blending of flowunder the crests, suggestive of strength and sibridges of Au- lence, and appropriate, for strong they gustus to the were, beyond doubt, and silent they could Adriatic, and be, with that mute and terrible secretiveholds in her ness which was the characteristic of all Corcordium the Italian tyrants.

No ruling race had greater foes than the ple of her lords of Rimini; and southward, in the medieval lord sunlight, lay the Urbs, the City of the Vicar of God, whose curse could smite ismundo Mal- the greatest and whose poison could reach



PILLAR IN THE CATHEDRAL BEARING



From the picture by Gustave Doré.

DANTE AND VIRGIL WATCHING THE LOST SOULS BORNE ON BY THE UNCEASING HURRICANE.

the best-beloved, from whom there was and, in like manner, her name has outno escape in time or in eternity, who claimed a divine omniscience and smote

with a devil's wrath.

It is difficult for modern students to realize the universal dread which lay on all human souls in those ages under the shadow of the papal throne. The world said then to the Pope what Aristophanes said to Plutus: "In thee all things have their rise and being. Thou art the sole cause of all." The highest, like the humblest, cowered before this papal curse. Henry had not at that period waited, naked and cold, in the snow, at Canossa; And the Malatesta, vicars of the Church, to bind and loose, and, centuries later, even this great Sigismund, when he raised his Templo, was forced to have his likeness painted on its wall kneeling humbly in submission before his patronsaint.

Belief in papal omnipotence and all the doctrines of the Church was rooted then in the life of men with a force and depth of which we can now form no idea. The only modern likeness to it is the awful influence and authority of the orthodox church in Russia. Thus, when the copies of the Paradiso and the Inferno found their way from hand to hand, all over Italy, we may be sure that Dante's vision of Paolo and Francesca filled the souls of men and women with a horror of which we have no kind of conception, for that which is to us mere imagination was to them a

frightful reality.

That vision has attached to Rimini an association which, to the world in general, is far more potent than the memory even of the great Sigismundo himself. Francesca of Rimini is a name known to the entire world; yet Francesca was born another Malatesta was her lover; and so closely interwoven with Rimini is the Signoria de Malatesti that, to the general equal to any three of their other towns; and himself was born when they touched

weighed those of her neighbors with that general public which is careless of accuracy and tenacious of legend.

She was a child, and a maiden, in that Ravenna which afterwards sheltered Dante :-daughter of Guido da Polenta, lord of that city. She was of the same age as Dante, or nearly so, and her tragic death took place when he was at the romantic and susceptible period of twenty years. The Inferno was not written until twenty-three years after her terrible end: but it was fresh in his thoughts, his friendship with her family having deepbut all civilized Europe waited so at, ened the impression made upon his boyish the doors of the Vatican and Lateran. sympathies. He may very probably have known her in their mutual youth, so that as they were when they first ruled the pity which he speaks of for her was Rimini, trembled before that power an intense emotion such as resisted the effacing force of time and of a troublous

> It is difficult to know why the caprice of the public mind has made Francesca a memory of Rimini, instead of a memory of Ravenna; or, why many travelers still fondly look to the grim old citadel in the former city as the scene of the perusal of the fatal book, instead of the palace at Pesaro, known as that of the Dukes of Hrhino

> She wedded Lanciotto de Malatesta. and her father-in-law ruled in Rimini: but her brief married life was passed at Pesaro, at that time one of the fiefs of the reigning race at Rimini. We know that the hapless marriage was solemnized by proxy at Ravenna, and consummated in Rimini itself, the nuptial festivities in both cities being signalized by great pomp and splendor. It was in these nuptial ceremonies that the beauty of the younger brother was seen (probably for the first time) in its cruel contrast to the ill-looks and misshapen figure of the bridegroom.

Some writers have endeavored to affect in Ravenna, and was slain at Pesaro, to see merely platonic attachment in the But she was wedded to a Malatesta; and relations of Paolo and Francesca; but to do so is to misunderstand the whole temperament of the Italian of both sexes. It is probable that when the beautiful ear, Francesca of Ravenna, or Paolo of youth, Paolo Malatesta, went to Ravenna Pesaro, would sound unmeaning and un- to marry Francesca by proxy, in his known. In the wills and deeds of the brother's place (as we know that he did Malatesta, Rimini was always counted as go), the love between the affianced maiden



PAOLO AND FRANCESCA.

ness of Lanciotto, when he was first seen than it might otherwise have been. Subsequently they were allowed to be much end came. together in the intimate and familiar manner of near relatives, and one day, in reading of the kisses given and taken by the lovers of the tale of chivalry, they yielded to the impulses of their mutual affection.

" Quel giorno più non vi leggemmo avante."

This all-eloquent line, so often cited as a supreme instance of the perfect art of Dante, could not by any possibility have been written of a passion which was not passion, but a more respectful sympathy. The line would have no sense, no meaning, no appositeness, in relation to an unfulfilled desire. It would appear, also, from what we know, that after that day when they let their books fall from their hands unheeded, and only read the language of each other's eyes, their intercourse, unsuspected by Lanciotto, had time to grow into a constant and sweet habit, into a relation concealed but continual. It was not broken until the usual informer and eavesdropper,

HOUSE IN RAVENNA WHERE FRANCESCA WAS BORN.

each other's hands at the altar; and this who is more general in Italy, the land attraction, companionship, and associa- of spies, than elsewhere, carried the tale tion rendered the deformity and unloveli- of their intimacy to Lanciotto, who, repulsive in person as he may have been, by her, at Rimini, still more repulsive does not seem to have been of a suspicious or malignant temper. Then the

> Francesca speaks of him to Dante with scorn and contamely; but, womanlike, she spares no remembrance to the provocation which she gave him. To hear her, he alone was the criminal; according to her, there is no chastisement great enough for the fratricide. But, looking back over six hundred years, we cannot but absolve Lancelot did no wrong in the him eyes of the Church, nor would he in this age be condemned for what he did by any tribunal. His doom has been hard enough in being delivered over to the hatred of his own and all succeeding generations by the immortal pardon of that poet who has made six centuries of humanity weep for the lovers who.

> > " al dolce nido, Volan per l'aer dal voler portate."

Francesca says that the crime of traitors and slayers of their own kin awaits Lanciotto when he also shall descend from the living world to the circles of hell, and Dante heard this judgment of hers on her still living husband without dissent. Francesca has no pity for him, nor has the world; yet he may have suffered infinite woe before he drove his blade through the fair, white throats of his young wife and that brother, whose beauty and grace had from birth so cruelly accentuated his own physical deformities. In those days men usually took much more cruel vengeance than a swift stroke of a sword : Pia Tolomei, Ugolino die Gherardesca, and a thousand others, perished miserably by long-drawn-out suffering, fiendishly devised. Lanciotto Malatesta slew fiercely, but swiftly, and so, mercifully. True, Francesca says that the manner of their death still offends her, which is one of those incongruous pieces of bathos from which the great Florentine is not free, though it is deemed literary heresy to think so. But in this she was ungrateful, for that age saw many more direful and torturing methods of "letting the soul go out from the body," than the







mortal stroke of a two-edged blade, drama which would be well known to all change.

have come down to us through that popular sympathy which it no doubt excited in contemporaries. But it is the

"Ouesti, che mai da me non fia diviso,"

which the poet lends to the lips of Francesca, which has made her forever immortal, which, touching the inmost chords of the human heart, has made her name

dear even to the ignorant.

No doubt her character, as known to the predecessors of Dante, must have been such as to suggest to him that exclamation which is the supreme triumph of love over misery, pain, and death. He would not have put it on the lips of a light and inconstant woman. In the days of Dante, and those immediately preceding him, love was usually a great and a grave passion. Inconstancy, levity, cynruder but more heroic thing than it beaccomplished periods of Italian history. The steel of the corselet seemed to lend its power of resistance to the hearts of men which beat beneath it, and the jeweled handle of the dagger hidden beneath the women's robes was not there for mere play or masquerade, but for tragic use if needed. Life was rough, strong, impassioned; and the passions to which it gave birth were not mere summer-day intrigues. "Violent delights" had then, lent endings."

And, after all, to die at the same moment readers of his manuscripts. Such tragewith the one beloved is, in many aspects, dies were so frequent in the Middle Ages. a desirable end, and is the only sure pre- such vengeance of a betrayed husband servative from disillusion, weariness, and was so common all over the land, that to introduce the lovers of Pesaro thus, he Possibly the fate of these lovers would must have known that, even after a score of years, their fate was still fresh in the public memory. The prominence, also. of the two ruling families to which they belonged tended to keep their fate long and vividly in the memories of the populations of the Adriatic coast. Few years had elapsed between the passing of Francesca as a bride from one city to the other and the secret burial of her wounded and dishonored corpse. Ravenna, and Rimini, and Pesaro had seen the morningbeauty of the two lovers, fair and radiant as the sunrise which spreads over the dazzling green of that enchanting sea. Thrust, blood-stained and disgraced into a nameless grave, their sorrow and their suffering doubtless was sung by every minstrel who wandered up and down the coast, from Fano up to Venice, or climbed the stony paths to Gubbio and icism, came later, with the Bianca Ca- Urbino, or joined a troop of free lances pello and the Lucrezia Borgia of a more going through the oak-woods of the luxurious and self-indulgent time. When mountains to sell their swords to Florthe elephant and rose, which were the ence. It is as of a name known to every emblems of the Malatesta, were freshly Italian ear that Dante, without preface or carved on the walls of that castle at explanation, speaks of that of Francesca. Rimini, where those carvings may, as I No doubt, also, the relationship of Paolo have previously said, still be seen on the Malatesta to Francesca del Polenta lent defaced and degraded stone, life was a to a tragedy, frequent and common in that age, the awe of a darker crime which came in later and more sophisticated and the Church saw in the love of those who were already brother and sister, not, indeed, by consanguinity, but by the fiction of the Church, through that religious union which the Church had sealed and would never unseal.

It was, probably, this Greek-like awfulness of destiny which sank deeply into the mind of Dante, predisposed as he was by temperament to the melancholy and the somber side of life and literature. The fate of Francesca and Paolo would as in the Elizabethan days later on, "vio- have similarly tempted the muse of Sophocles, the art of Æschylus. If he It is probable that the story of Paolo had not known her in her girlhood beand Francesca, of which so little is known fore the ill-fated Malatesta marriage, he, to us, was one which deeply affected the no doubt, knew many of her relatives, popular mind in Central Italy, since with whom, in his later sojourn in Ra-Dante introduced it in his narrative venna, he must have heard every detail without explanation, and evidently as a of the tragedy of Pesaro. He perhaps



knew that Francesca had been of that not say: "Blessed was that story of chiv-Italian women) to which it seems prefereach other's souls as in a mirror." able that the beloved one should suffer in "Questi che mai da me non fia diviso." vehement exultation, but it is not without a taint of cruelty, and it is egotistic. A great love which had also been unselfish, would have cried: " I will suffer, would have been filled with an agony of remorse for the damnation into which it had dragged its beloved; Ophelia and Gretchen, northern maidens, would have not have felt otherwise than he has deacross the billowy flames of hell.

We have been accustomed to consider tion to her lover than there is arbitrary possession of him. She believes that he tion of love than Francesca. We have terrible as is love itself. The story of been accustomed to regard the wife of that aversion and regret of the book been illumined by the imagination of power to read the secrets of each other's through the dread and lurid shadows of hearts. She does not say: "Blessed was hell. that book, since it united us;" she does

temper (one to this day frequent amongst alry and passion, since in its lines we saw

Héloise, shut in the hell of a convent a common doom of misfortune rather than prison, never regretted that she had given escape to be happy elsewhere. There is her whole life for a few hours of love, something fierce and exultant in the The women of Italy, on the contrary, have been oftentimes heroic, oftentimes It is the relentless egotism of a passion, sublime, but they have seldom been tenintense but never unselfish. It is con- der or self-forgetful. It is not in the stant, it is ardent, it is breathless, with a national character. Revenge is dear to them, and their hold is tenacious, and their tenacity is unforgiving. They cannot support or pardon infidelity. It is possible that Francesca had not been but pardon and free my beloved!" It always certain of the constancy of her lover, and hence her fierce, exultant cry, "Questi che mai da me non fia diviso!" In the lost life at Rimini and Pesaro, perchance there had been those of whom she felt so. Dante has been entirely true to had been jealous, some court-beauty, in the nature of his countrywomen. Fran- cloth of gold and ermine, or some woman cesca, a siren of the Adrian sea, could of the people, with her water-pitcher balanced on her ebon hair. If it were so, it picted, with her defiant triumph hurled was to that rival, who still breathed the upper air, and still saw the sea-waves sparkle in the sunlight, that Francesca Francesca as the type of female devotion. spoke, rather than to Dante. We cannot but, if we reflect, there is much less devo-tell; but we may, I think, not unjustly suppose it.

Italian archives and traditions teem and she are condemned to torment for all with such stories, usually cut short by time, and she rejoices in it, because thus the dagger, the cord, or the poisonhe is forever hers. True, there is in her cup. Some of them are marked by also an indifference to her own torture, great heroism, like the story of Imelda which, in its way, is sublime; but she is and Bonifazio of Bologna; some are ensupported in it by the knowledge that nobled by generous sacrifice, like that of an eternity of suffering will be likewise Salimbeni and Angelico of Siena; some an eternity of union. She would not, we are romantic, with the very flower of pomay be sure, consent to purchase her etry, like that of Ercole Strozzi and Barlover's release by acceptance of solitude bara Torella, at Ferrara. Such historic and desertion. She does not once say: love-stories are countless, and all glow "Leave me here; let him go back to life with the fires of youth, vibrate with unand light." Héloise has a higher concep- worn emotions, and are at once lovely and Paolo Malatesta and Francesca del Polen-Lanciotto Malatesta as the type of ideal tais but one amongst thousands of others, passion; but we have been mistaken, for and it would not have shone out like a a great love would not have spoken with star from the mists of the past had it not which had been the cause and witness of Dante. One wonders what gained it that their first embrace. It would have been supreme distinction: what made that dear and sacred to her beyond measure, story of all others rise to his memory and since to its pages they had owed that fill his fancy as he moved in thought

It is probable, I think, that it was not



From the picture by Gustave Doré.

PAOLO AND FRANCESCA AMONG THE LOST SOULS, BORNE ON THE HURRICANE PAST DANTE AND VIRGIL.

and a book was not a jewel in their eves. For a young man and a young woman to peruse a romance together was a rarer than it would be in this day. Few were the folios, and fewer still those who cared to treasure them. The fact that they were students doubly endeared those ill-fated children of the Adriatic to the great scholar who immortalized their fate.

True, what they read was an amorous history, a novel, as we say nowadays: the humanities, which must especially te. I am not aware of any contemporary it is a triumph to her. statement which authorizes us to suppose guide to their ill-starred attachment, and that when he made the shade of Francesca speak of such perusal as the crystallization of their reciprocal love, he did this because Francesca had in life made that confession to him. Or, if the confession had not been made to himself in life, it may have been made to some one of her associates of early days in Ravenna, who related it to Dante in those grave later years when he sought the protection of that solemn city which had giv.n the fair Francesca birth. We know that the great Florentine was always personal. The Divina Commedia is colored throughout with his own hatreds, sympathies, animosities, attractions, memories, and wishes. He has nothing should never be placed as an equal.

Therefore, he selected Francesca for his heroine, because she had been known to by his silence and his tears.

merely the fact of Francesca being the him, had been the daughter of the friend daughter of the Polenta, and possibly of his family, and had blossomed like a having been known to Dante personally flower and been like a flower cut down, in in his boyhood, that made her destiny those storied towns of the eastern coast produce so intense a sympathy in him, which were so well known to him in the I think another tie to such sympathy was years of his exile. Doubtless, also, it formed by the recollection that both Fran- was his regard and respect for the Polenta cesca and Paolo had been, in their young family which led him to represent Franlives, students. Guido del Polenta, we cesca as coming from the same sphere as know, delighted to honor letters; and his Dido, dove-like in her floating movement, daughter must have inherited that schol- and interlaced with the shade of her lover, arly taste; for, usually, the ladies of that but not classed with such as Semiramis, period read little and had little to read, and Cleopatra, and Helen, of whose "vizio de lussuria" he says : "Che libito fe licito in sua legge."

Of Paolo Malatesta, we are only told thing at the close of the thirteenth century that he wept. Strong military races have always some weaker, more tender, more womanlike scion, and beyond doubt he was such an one, of a nature to be swept off his feet by the flood of an overwhelming passion. On earth, as in hell, he was beyond doubt the slave, perhaps even the victim, of Francesca. One cannot resist the impression that he would but to read even this, showed, in those most willingly, if he could, have broken times, a genuine and cultured taste for away and left her there alone. Their eternal union in misery is in no sense a have appealed to such a scholar as Dan- consolation to him, to the degree in which

Dante has made the most cruel of so, but I cannot resist the belief that their all the tortures of hell - the power of perusal of a book at a critical moment memory, the endlessness of regret; and was a fact known to Dante as the first that regret the lover felt more poignantly than his mistress: her woe could find voice, his could not. In that ghastly, aërial course, ever vainly seeking the "dolce nido," the return to earth; ever borne backward by the opposing currents of air to that eternal shadow in which they were forever henceforth to dwellregret, futile regret, was ever with them. They regretted the life of earth, the galley on the green water, the light on the smiling hills, the blast of the clarion, the thrill of the lute, the shock of steel, the scent of flowers, the silken litter, the broidered bed, the laughter and the tears. They regretted; and with that regret there mingled the bitter sense that they had been each other's curse.

Dante would fain hear how and when of the impersonality of Shakespeare, be- love came first to them in its full conside whom, if for that reason alone, he sciousness, and Francesca answers him with eloquent completeness and passionate reproach. But her lover speaks only



PASTEUR.

BY JEAN MARTIN CHARCOT.



SKETCH OF PASTEUR MADE O. ROTY AS A STUDY FOR A MEDAL.

was born in in the Department of the Jura, on the 27th of December, 1822. At the age of twenty-one he went to Paris to complete at the École Normale Supérieure, the solid studies begun in his native province.

There he was made, successively, assistant in physical science, preparator in chemistry at the Ecole Normale, and doctor of sciences. A few years later he became professor in Strasburg, then France, delegates from the universities dean of the scientific faculty of Lille, and colleges of the whole world came and

OUIS Pasteur to Paris to become director of scientific studies at the École Normale, then pro-Dôle, a small city fessor of geology, physics, and chemistry at the Beaux Arts; finally, professor of chemistry at the Sorbonne. The Academy of Sciences, the Academy of Medicine, and, finally, the French Academy, opened their doors to him. In the course of his long career he has received from France and from the entire world the most flattering and enviable honors and distinctions. On the 27th of December, 1892, on the motion of the medical and surgical section of the Academy of Sciences, the seventieth anniversary of his birth was celebrated in the old Sorbonne. The president of the republic, the ministers, the members of Parliament, the diplomatic body, the scientific societies of From this city he was, in 1857, recalled presented to Pasteur the tribute of their

Note.—The task of preparing a sketch of the most interesting character who figures in modern medical progress was committed by the editors of The Cosmopolitan to one almost equally as famous. Soon after the receipt of the manuscript, Doctor Charcot died. He was born in Paris in 1825. From 1862 to the time of his death he was physician at the celebrated hospital of La Salpétriere. Here he arranged the anatomical physiological museum and laboratory, and here held his famous classes on nervous diseases. The lectures delivered to these classes are his chief fame, and have been translated into every European language. Among his other important contributions to medical science, his work on localization in cerebral physiology stands preëminent, though he is more popularly known through his experiments in hypnotism.

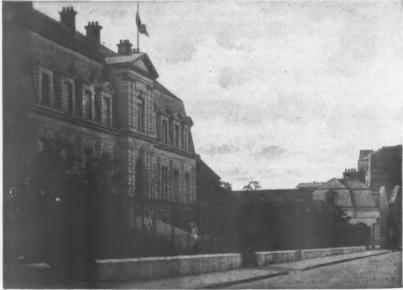
grand jubilee, the very festival of science, the apotheosis of the great savant, who thus, before his death, entered upon immortality in the midst of unanimous acclaims

The work done by Pasteur is immense. In his investigations he has touched upon the various branches of physical, natural, and medical science. His publications are scattered in the Bulletins of the Academy of Medicine, in the Annals of Chemistry and Physics, in the Reports of the Congresses of London, Geneva, Copenhagen, as well as in several continuous works. Especially deserving of mention are his studies on crystallography, on rotatory polarization, and on the molecular constitution of paratartaric acid; but what raised him to the first rank were his studies on spontaneous generation, and on lactic, tartaric, and alcoholic fermentation. In 1866, he published his monograph on wine, its diseases and the causes that provoke them, then, in 1868, his researches on vinegar, its diseases, and the means of preventing the same. In 1870, appeared his "Essay on Silkworms; 'h in 1876, his investigations on beer and its diseases; in 1884, his im-

enthusiastic admiration. This was a mortal work on rabies, its prophylactic and curative treatment. Meanwhile, he had discovered the artificial attenuation of virus, and had applied this method to the preventive treatment of carbuncle and hen-cholera.

To appreciate at their true worth the labors of Pasteur, several volumes would be necessary. Yet a clear idea of them can be given in a sketch of a few pages, so simple are they in their main features. They rest wholly upon the experimental method, to which he has always been most faithful. Without any predetermined opinion, guided alone by a desire for truth, he has added experiment to experiment, observed with scrupulous care the phenomena developing under his eyes, analyzed them, compared them, and has at length discovered the laws that control them. "Imagine what hope possessed me," he said at his jubilee, "when I first had a presentment that there were laws behind so many obscure phenomena!"

In Pasteur's works, all parts are held together, without a break, by an inflexible logic. The first link of the chain was the discovery of animated germs. A determined adversary of heterogeny, he



THE PASTEUR INSTITUTE, PARIS.

showed that these germs are not spontaneously produced, that they people the atmosphere and the bodies that surround us. If, by ebullition or dry-heating, a solid or liquid body (milieu) is rid of the germs it contains; if, to use the consecrated expression, it becomes sterilized, this body remains sterile, that is to say, limpid and unaltered, as long as it is kept from the air. But as soon as air is brought in contact with it, germs begin to develop and disturb its limpidity. Evidently the germs developed are not spontaneous; they come from without, from the surrounding atmosphere. Pasteur has repeated this memorable experiment a hundred times, in varying conditions, always with identical results. He proved at the same time the identity of the germs found in the air and in the milieu. His demonstration was decisive; the more so because he showed that if, by counterexperiments, the atmosphere itself had been sterilized, it could with perfect impunity be allowed to come in contact with the sterilized milieu. For more than twenty years there have been preserved at the Pasteur Institute some of the flasks used in that wonderful experiment. The liquid they contain has kept its original limpidity.

Spontaneous generation was dead. Pasteur had definitely established the presence and rôle of the micro-organisms. concerning whose existence savants had To-day, these disputed for centuries. facts have become common property. and we wonder it took so long to establish them.

By cultivating these germs in milieus adapted to them, studying their development and their biological conditions, by following out their mode of life, Pasteur created, in all its main outlines, a new science, bacteriology-a science which has since, in his hands and in those of his successors, yielded the richest results.

The immediate and natural consequence of this discovery was his famous theory of fermentation. He proved conclusively that organic putrefaction does not, as was believed, result from purely chemical action, but is determined and governed by the intervention of living germs, by the development and life of inferior micro-organisms. This revolution-for it



PASTEUR WHEN AT THE ÉCOLE NORMALE, AGED TWENTY.

without a hard struggle. Pasteur had to meet formidable adversaries, the most illustrious of whom was Pouchet. But his victory was complete. Spontaneous generation of microscopic beings was relegated to the rank of indefensible hypothesis; the Pastorian theory was immutably settled. From that day date Pasteur's admirable experiments on wine, vinegar, and beer, which were direct applications of the doctrine of living germs. Later, as a corollary of it, came his discovery of the attenuation of virus. He succeeded in artificially varying the virulence of those germs, increasing or diminishing it at will; then, taking the attenuated virus and injecting it, he rendered the animals so treated refractory to the disease, thus finding in the very evil its own remedy. These animals not only bore with was nothing less-was not accomplished impunity increasingly strong doses of



PASTEUR IN HIS STUDY AT THE INSTITUTE.

of strong virus that would, in their normal condition, have proved immediately fatal. This method was soon adopted in practice. In former times severe and destructive epidemics of carbuncle (charbon) decimated the stables of France, epidemics of cholera depopulated hen-yards. Since Pasteur's discovery, the carbuncle and hen-cholera exist only in the recollections of farmers. The benefits of this method are to-day incalculable, and the number of animals saved by it is reckoned by the hundred thousand. By his experiments on ferments, on the diseases of wine, vinegar, and beer, Pasteur had

rendered invaluable services to industry and our food supply; by his preventive vaccination, he became the neverto-be-forgotten benefactor of the agriculturist.

But greater things were still to come. The logic of his method led him, step by step, up to man himself, and to Pasteur was reserved the glory of proving that in the human body, also, living germs are the cause of transmissible and contagious diseases, and of applying to human ailments his theory of the attenuation

the greatest benefactor of mankind. Afworker, a fruitful inventor in chemistry, biology, natural history, medicine, and philosophy, he signalized the last part of his long career by a marvelous discovery.

He has been more fortunate than were Harvey and Jenner, in so far as he enjoys, while still living, the triumph of his doc- infectious agent after it has penetrated

attenuated virus, but also powerful doses trine, But he had to struggle, first, against prejudices, then against obstacles and difficulties of all kinds. When he tried to apply the microbian theory to contagious diseases, he met with systematic opposition in the Academy of Medicine itself. It is fair to say, however, that the majority of this illustrious body sided with him from the first.

> The natural sciences have largely benefited by Pasteur's discoveries, but it is, after all, medical science that has been most powerfully affected. A revolution, the scope of which cannot yet be measured, is taking place in medicine. By proving that the penetration and pullula-

tion of living germs is the necessary cause of contagious diseases among human beings, Pasteur at the same time pointed out the remedy. Thanks to him, the physician can, by means of suitable antiseptics, fight microorganisms, arrest their development, destroy them, and consequently cure the disease they had caused. If success does not always crown his efforts, the reason of this is not in the method, but in the facts that for each microbe must be found an antiseptic



JEAN MARTIN CHARCOT.

of virus, thus preventing disease, and that most quickly and certainly destroys even stopping it in its evolution when it; that it is not always easy to have the already at work in the human organism. remedy reach the seat of the disease; that For such is really the whole secret of his in the endeavor to destroy the microbe treatment of rabies, which has made him care must be taken not to destroy the patient; for in a human case things canter having shown himself from the first not be done as in an experiment in vitro. a sagacious investigator, a persistent Therefore, there are still desiderata, uncertainties, failures. The perfecting of the method must be left to the future. Besides, bacteriological science is still in its infancy. But the results obtained are, on the whole, full of encouragement.

If it is not always possible to reach the



THE HOUSE AT DÔLE IN WHICH PASTEUR WAS BORN.

the human organism, nothing is easier oughly tested and firmly established, has than to prevent its transmission.

Thanks to Pasteur the contagion of infectious diseases can to-day be averted. Isolation and disinfection, if practised intelligently and vigorously, are certain to the intimate cause of infectious diseases, accomplish this. To-day these epidemic plagues can be checked in their march and stamped out in the place of their origin. In a very near future, probably, thanks to the progress of this method, the terrible epidemics that have so often devastated Europe shall have disappeared from the face of the earth.

By applying to animals his process of the attenuation of virus, that is by vaccinating them, Pasteur had bestowed upon them immunity from contagion. There now remained only to apply the same method to human beings. It was out of the question, of course, to vaccinate a man against problematic diseases to which he might never be exposed. Pasteur decided,

therefore, to change from a preventive to a curative treatment. and to try this on rabies. He had discovered the rabies virus in the saliva and the nervous centers of mad dogs; he attenuated this virus by means of a special desiceating process and used it to inoculate animals already bitten by mad dogs. Subjects thus treated did not become mad. He had, therefore, succeeded in curing rabies in animals.

But was it safe to apply this treatment to man? Was there not danger of communicating rabies to persons yet free from it? We can easily understand the great savant's anxiety. But he had perfect confidence in his method, and did try the experiment. The case, as is well remembered, was that of a young shepherd recently bitten by a mad dog. He was completely cured. The event created intense interest the world over. From all countries hundreds of persons who had been bitten hastened to Paris. Results went far beyond expectations. The antirabie treatment was thor-

since been introduced everywhere, and has everywhere met with remarkable success. To Pasteur, then, the physician is indebted not only for the knowledge of



PASTEUR'S PRIVATE ENTRANCE TO THE PASTEUR INSTITUTE

but also for an infallible remedv against the most dreadful of all maladies.

The hygienist is under equal obligations to the great savant. By the application of his method, cities, countries, whole continents, indeed, have been protected against the most dreaded epidemics. Beyond a doubt, thousands of lives have thus been saved. Surgery owes to him the discovery of aseptic and antiseptic treatmentswith all their brilliant results. Thanks to them, the terrible complications of sores-purulent infection, erysipelas, septicemia, which formerly devastated hospitals-only exist in the memory of surgeons. Obstetrics has been revolutionized and puerperal infection no longer transforms the lying-in maternity hospital into a huge necropolis. If a physician of the old school should rise from his grave, he would doubtless ask himself what genius has produced such changes, for in the domain of medicine things are completely metamorphosed. On this point, the testimony of the famous English surgeon, Lister, is most significant and au-

thoritative. He was the first to apply to surgery the germ theory, to dress wounds with antiseptic applications, the first to extol asepsis and antisepsis, and in 1892, when bringing to Pasteur an address from the Royal London Society, he exclaimed: "Really, there is not in the whole world a man to whom medical science owes

more than it does to you."

Certainly, there is none to whom our suffering humanity owes a greater debt of gratitude. His services to it in the past and in the future are incredible. His labors have been so vast that one is disposed to doubt that they are the work of a single brain, and not the contribution of several generations. He is certainly the glory of his native land, but he is more, he is also the glory of the close of the nineteenth century, and if it was still the usage to bestow upon an age the name of a single tense interest, so that, on the day of his



MEDAL GIVEN TO PASTEUR ON HIS SEVENTIETH BIRTHDAY, DESIGNED BY O. ROTY.

man, ours might justly be called the Age of Pasteur. Certainly, he could exclaim like the poet of old, and with much more justice: "Exegi monumentum ære perennius." The learned and the unlearned unite in proclaiming the greatest of his achievements.

Endowed with keenest insight, with unwearied energy and tenacity, he concentrated during long years his thought upon the same subject, without being discouraged by the systematic opposition he met, especially among some of his own countrymen. His genius bore down all contradiction, and his final triumph has been complete.

He has lived "in the serene peace of laboratories and libraries," in the midst of those "infinitely little things," whose development he followed with such inreception into the French Academy, Re-teriological studies, the results of which nan could say of him "that his scientific career is a luminous track in the profound night of the 'infiniment petit,' in the lowest levels of being, where life originates." Once only did Pasteur step out of his favorite working retreat. It was to raise his voice and show that, though science knows no country lines, patriotism and love of humanity glow ardent and pure in the heart of the true savant. It was in 1871, during the bombardment of Paris by the Germans. Pasteur wrote to the dean of the University of Bonn, to request him to erase his name from the list of the honorary doctors of the university, "as a mark of the indignation felt by a French savant for the barbarism and hypocrisy which, to satisfy criminal pride, persist in the massacre of two great nations."

Since the final triumph of his theory, -that is, since 1886, -Pasteur, loaded with honors, surrounded by the affection of his family, enjoying universal respect and admiration, lives in the magnificent institution that bears his name. Built and endowed by the gratitude of the French people and of all civilized nations, the Pasteur Institute has become a center of chemical and bacare published in the "Annals" under the direction of Pasteur himself and of eminent colleagues, such as Duclaux, Roux, Chamberland, Graucher, Straus, Metchnikoff.

The admirably-equipped laboratory of the institute is open to the élite of French students and the savants of the whole world. Among the work there done must be mentioned the extremely remarkable studies on diphtheria, by Messrs, Roux and Yersin, and those of Mr. Metchnikoff

on phagocytosis.

But the Pasteur Institute is especially intended for the treatment of rabies. Thither come from all countries numerous unfortunates tormented by an awful dread and threatened with a frightful fate. They are, for a fortnight, subjected to anti-rabie inoculations according to the intensive method. Then they return to their homes comforted and cured. Thus the institute has become, not only a center of high intellectual culture, but a source of relief from human suffering. The day will come when grateful posterity will engrave on its frontispiece this modification and antithesis of Dante's famous line: "Gather hope ye who enter here."



From the drawing by Edelfelt. PASTEUR IN HIS LABORATORY.

THE THEATRICAL SEASON IN NEW YORK.

BY JAMES S. METCALFE.

view the present theatric landscape, it would doubtless have the appearance of a low-lying morass enveloped in a thick cloud of fog. The observer might fancy that here and there he saw a luminous point or a bright area, but further thought would convince him that his eyesight had deceived him.

It is not necessarily pessimistic to reach this conclusion. The entire world is in a stage of rapid transformation such as it has never known before. Formerly, the map was changed by the varying fortunes of different conquering or conquered heroes, and by the shifting destinies

of warlike nations. The implanting of the habits and customs of the conquerors was a tardy process. To-day, the march of invention is so rapid that the entire domestic lives of whole nations is changed within a decade. Your inventor is the true conqueror in this nineteenth century, and he makes his influence felt not only in geography, which is largely made by machine guns, but in the intellectual and artistic life of entire peoples.

Time was, and not so long ago, when the public at large gained much of its literary culture from the stage. Many a man who could not read could quote in fragments or at length from Shakespeare. To be sure, he might not be letter-perfect, but he had at his tongue's end the sentiment. the thought, the rhythmic swing, and, as near as he could approach to it, the unusual verbiage of the author. He had never known schooling, and books were an expensive luxury, even if he had known how to use them. The newspaper, as we know it, did

F one might ascend in a balloon and not exist. But the theater reached him through the eye, that knew how to observe, and the ear, that knew how to compare, even to the criticism of a false quantity.

> Now, comes the inventor. He makes all forms of living cheaper and more luxurious. By labor-saving devices he increases the world's total of leisure. He also increases the mental strain by inducing a stronger competition for increased rewards. Education becomes an essential; books are cheap, and the newspaper, good or bad, becomes the daily companion and ever-present instructor and entertainer. The theater, as a purveyor of



LULU GLASER.



MARIE YORKE.

literary culture, recedes to a second or third, or even worse, place. It becomes simply a means of amusement, and so long as its parrons are amused, they de-

is not necessarily pessimistic to admit a marked decadence in the stage and its work. Toadmit this is simply to confess that perhaps the world is better off when it goes to the theater only to be entertained, instead of going to it because it is the sole place where culture can be absorbed simultaneously with amusement.

The past few seasons in New York have strongly marked this descent in the functions of the theater. The number of playhouses has increased, but the stages occupied by entertainments that appeal to the intellects of the spectators are fewer in proportion than ever before. The production of a play by a standard author, no matter how competently done, is an unusual event, and is undertaken with the almost absolute certainty of loss to the management. To require anything more than the most superficial interest from an audience means that a piece is voted dull, and that its financial backers must pocket a loss.

Mr. W. H. Crane, Mr. Richard Mansfield, and Mr. Charles Hoyt, representing the view-point of actor, manager, and playwright, have this season publicly voiced their sentiments on the situation. and from varying outlooks have reached the same conclusion-that there is no financial profit in giving this public anything except that which will easily stir an emotion, easily create a sensation, or easily produce a laugh. Anything which requires more than superficial knowledge, more than a moment's thought, more than a pretense of culture, in short, anything that cannot be instantaneously absorbed, as it were, through the pores, without any resort to the understanding, has become too laborious for the Amerimand nothing more. On this account, it can public, and will not receive financial

reward. As the managers who rent theaters, provide accessories, and hire actors are not in this business entirely for the sake of passing time, it is obvious that they are not going to bankrupt themselves by investing their capital in productions that the public will not support.

Casting one's eve over the dramatic season of 1894-95, as it was up to the first of December, everything goes to prove the truth of what has been said above. The serious



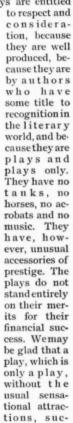
productions - meaning by serious that voted the play stupid, and it had to be which is intended to appeal to anything more than the eye or ear of the publichave been few in number, and have sought in vain for popular patronage. Most important among these was Mr. Crane's revival of "The Merry Wives of Windsor." The production was an excellent one, scenically and artistically, but the

felt impelled to state publicly that he had made an unprofitable experiment. His immediate jump from the classic drama to "The Pacific Mail," an old play patched up and galvanized by Mr. Paul M. Potter, and the consequential return to financial prosperity, have not only furnished a practical object lesson to Mr. Crane, but will doubtless serve as a danger-signal to others from whom we might reasonably expect similar experiments.

Another Blood" Mr. Augustus Thomas, a playwriter who has hitherto been successful, dared to present a sociological problem. Aside from this, the play had something of a plot, and a fairly interesting dialogue. It was produced with an exceptionally strong cast. It was well mounted and purely critical mind. smoothly performed. But the New York public, which feels more than it thinks, are actors who have a certain vogue

withdrawn, after a forced run of a very few weeks.

The failures-from the popular point of view-are combated by a couple of successes. "The Bauble Shop," of Mr. Henry Arthur Jones, and "The Way to Win a Woman," of Mr. Jerome K. Jerome, have brought profit to their owners management lost money, and Mr. Crane and managers. Both plays are entitled





MRS. LANGTRY.

failure points the same moral. In "New ceeds; but we grudge its success if it wins through anything but its merits as a drama, and a drama well performed. That it is produced at a fashionable playhouse, that its leading performer is the pet of society or of the matinée girl are things which militate against it in the

Mr. John Drew and Mr. E. H. Sothern

ported by women. A really robust performance would be difficult to either of them. Mr. Drew's Petruchio was the strongest thing he has ever done, and so long as the matinée drama continues to draw, he will not be expected to do anything at all like it. It is enough, both for him and for Mr. Sothern, that they not offend. They have the backing of what is called society and of every resource which is at the managerial com-

does not necessarily deny the postulate that the legitimate does not pay.

It does not follow. from what has been said, that either of these gentlemen, or any other star, no matter how well backed or how fashionable, can make a really bad play succeed. The failure of "The Victoria Cross" is a case in point. On it was expended all the resources of the Lyceum management. The matinée clientèle of the theater and of Mr. Sothern was quite ready to rush to the rescue of the piece; but it was so very bad that even this steadfast contingent withdrew its support. When "The Way to Win a Woman" was substituted, the vogue of the Lvceum Theater and of Mr. Sothern again asserted itself to give success to a piece which is only of mediocre merit, but

entirely independent of their artistic abil- which has, at least, the claim to lie withities. They have been made and are sup- in the lines of legitimate drama. The success of Mr. Jones's play and of Mr. Jerome's does not mean a victory by any means for the legitimate, but does mean that two fair plays, with popular favorites in the leading rôles, and produced at fashionable theaters, may command financial success.

Besides the well-known plays of his have plays which are polite and which do répertoire, Mr. Mansfield gave us the first American production of "Arms and the Man," and a new play by an American author, entitled "Napoleon," The mand. Therefore, they are adventitious former being constructed on unusual aids to any play which is properly pro- lines, had created something of a sensaduced, and the success of the play in tion in London, and was regarded there which they appear, with the support as worthy of serious interest. Mr. Mansgiven to them by their present managers, field not content with the unconvention-

ality of the play, sought to add to its peculiarities a new batch of eccentricities and affectations of his own. combined with insufficiency in the leading female rôle, completely muddled New York's intellectual audiences, and they gave up the conundrum in despair. "Napoleon," as a play, was too weak to merit serious attention. Mr. Mansfield complained of insufficient financial support, although it has been stated that this year's engagement was one of the most profitable he has had here. If he is really dissatisfied with his rewards, it might not be unwise for him to draw the inference that more sincere art and less charlatanism in his methods might make him more pop-

Mr. Daly's stage has been given up to a short and not glori-



VICTOR MAUREL AS IAGO.

ous revival of two of his earlier successes, and to the wonderfully profit-able run of "The Gaiety Girl." The latter was a combination of a succès d'estime and of the patronage of that large element in our theater-going population which will go to almost anything which combines attractive femininity, light music, and fun.

Another production which manifests a popular tendency is "On the Bowery," a series of pictures of low life, to which Mr. Steve Brodie, a per-

son who first gained fame by jumping a factor to be commended. from the Brooklyn bridge, lent his artistic abilities and notoriety. Large money returns have rewarded this peculiar play, not only in New York, but in other parts of the country. In this success there may be a hint. It differs from the case of the money-making plays with prizefighters as the leading attractions, as their success may be attributed largely to a species of hero-worship. In Mr. Brodie's case, the people are rewarding an entertainment which is artistic in so far that it is true to an interesting phase of real life.

The appearance of Miss Olga Nethersole in purely dramatic productions has been an event of some moment, but only in so far as it gave us promise of a new and competent artist. One of her plays-"The Transgressor"-was too serious, and, in a way, too instructive to meet with popular and financial approval. The other was the hackneyed "Camille," which was only valuable as giving us an opportunity to measure the actress's powers. Her success, artistically, was pronounced, but the support she received from the public was only that dictated by curiosity, not to see a performance, but to see and pronounce upon her appear-



SYBIL SANDERSON.

ance, her garb, and her personality. It is a little too early yet to determine Miss Nethersole's true artistic value. but lovers of the real drama may congratulate themselves on the fact that she gives them what our racing friends call "a run for their money," and that her efforts are bound to gain the reward of at least a succès d'estime. Anything-be it even the personality of a new actresswhich can attract the public at large to any sort of an interest in the purely play-acting stage is

Mr. Sydney Grundy's play, "The New Woman," fairly well produced at Palmer's Theater, made little impression because it was satirical, and its satire was aimed at a condition of woman's development



From a photo, copyright, 1894, B. J. Falk, N.Y. AMY BUSBY IN "ARMS AND THE MAN."

reason, outside of some clever dialogue, for enjoying success elsewhere than in

England.

Here has been stated the condition of what, for lack of a more distinctive name, has been called the legitimate or serious drama. It will be seen that it is struggling for existence, and that it only exists at all by adventitious aids. The real successes-that is, the popular and financial successes-lie in entirely different fields. Most conspicuous we have what is known as light opera. In this territory nothing especially notable has been produced up to the present writing. The annual resurrection of Mr. Francis Wilson and Mr. De Wolf Hopper has not set either the East or North rivers on fire, and the advent of Miss Della Fox as a star has not caused the constellations to move from their places. Nevertheless, the New York public is so much devoted to this form of

entertainment that its financial rewards have been adequate. and its promoters are doubtless encouraged to try again. On top of these productions came two others in the same field. "Rob Roy" was successful because it tickled the palate of the lightopera goer with a Scotch, and therefore novel, setting. "The Queen of Brilliants" failed to score because Miss Lillian Russell has ceased to be sufficient of a popular favorite to carry an opera without merit.

In burlesque we inherited "1492" from last season, and this profitable skit then gave way to " Little Christopher Columbus," an imported piece, which, from the very fact

was a transplanted idea, and had no real that it was partly imported and partly domestic, failed to make anything like the impression of its predecessor. matters of this sort the crass multitude is likely to insist that there shall be no mixture of the home and foreign product. America will stand things that are purely American, and others that are purely foreign, but grafting American humor on to the inanimate trunk of a piece written for local consumption abroad has never been greatly successful.

> Farce comedy has given what looks like its last expiring gasp in the not over-profitable production of Mr. Charles Hoyt's "A Milk White Flag." Mr. Hoyt is easily first in this field, both as author and manager, and when a production to which he devotes all his resources fails to more than half succeed, it looks as though the farce-comedy rage has run its course. This form of dramatic and musical entertainment fully served its purpose, which

> > was only to amuse, and it is rather to be regretted that it should have been so thoroughly overdone as its purpose was an innocent one and not entirely outside the field of minor art.

> > At this writing, the grand opera season is just beginning, and, although the names of some of last season's favorite artists are lacking from the announcements, it bids fair to be brilliant, both artistically and socially. Its financial foundation is laid in advance, and rests on a basis entirely independent of the merit of the performance. The musical season has produced no remarkable features, and, aside from the opera, there are none in sight. The oratorio



OLGA NETHERSOLE.

and symphony organizations announce structor. This is the establishment of an their usual programs, but neither instru- endowed theater to maintain the highmentally nor vocally are we promised any- est possible standard of dramatic art and thing of unusual interest or merit.

imate stage. The old traditions and their supporters, seem, in a way, to be dying out. There is a sporadic and, perhaps, growing dissatisfaction with the present state of affairs, but it will have to become very much more pronounced to produce any practical result. Managers cannot produce high-class plays with expensive companies for the entertainment of a few people. If it could be brought about, there is one salvation for the American stage as a public educator and in-

accessory. New York should be jealous The lesson of the season, so far, is a enough of its position as a metropolis to natural downward tendency for the legit- provide this. What some of its gener-

ous citizens have done for opera, others might more easily do for drama. It is not all a dream to hope for this. Some day will arise the man for the cause, and it is not likely that his appeal will be made in vain. To a love and enthusiasm for dramatic art and literature he must add technical education and executive ability. Such a genius will surely appear to save the American stage from its present degradation and to establish a high standard for the whole country.



DE LUSSAN.

MELANCHOLIA.

BY JOHN ALLAN.

SURRENDERED to the mystery of years, A haunted life. Slow come the wandering, white, Phantasmal terrors wreathing in the night, Lashing to flame the spark of secret fears: What ministries of darkness haunt her, tho' none hears The flapping wing, the word of quick affright! Her eyes, long dimmed by sorrows recondite, Expand in mystic transport, charged with tears.

Yet darkness brings a cold deliverance: Hope dawns no more, nor happy memory: Silent she treads the solemn realm of trance, And deeper weaves the spell of Hecate, Until with vandal jest and minstrelsy Death brings beguilement in his mocking dance.



Drawn by G. J. Allan.

"MELANCHOLIA."

THE CATHEDRALS OF FRANCE.

BY BARR FERREE.

OMPARISONS in art are invidious. cathedrals of England are as truly the glory of that country as those of France are of its continental rival and hereditary foe, but no one can fail to recognize the superior architectural glory of those of France, or ignore the fact that Gothic architecture originated in the Ile de France, where it underwent its utmost logical development, and from whence it was disseminated throughout Europe. But the two groups of churches should not be compared. The development of the art of each was characteristic and distinct, and each corresponded best to the needs of the people among whom it was produced, and where it clearly illustrated its own conditions and limitations. The Gothic cathedral, wherever it was built, thoroughly reflected the life of its time and the character of its makers. It is this which makes it great, which gives it its art, which makes it speak to us in this nineteenth century with the powerful voice of the deeply religious and artistic life of the Middle Ages, as plainly and as distinctly as it spoke in the thirteenth.

The cathedrals of France, par excellence, those which are its greatest glory, give it its broadest distinction, form, in a word, its most renowned and perfect churches, are those of the Ile de France, the Royal Domain, the seat of the monarchy, that which was truly France when they were built, and from whence a great architectural movement spread over the whole of modern France, and thence into all of Western Europe. The steps in this architectural progress were not confined to the cathedrals. The monasteries were quite as important links in the chain; more so, in some instances, perhaps, for the monks were the greatest of Christian builders, and carried their art, their methods, their style wherever they formed communities -which is equivalent to all Western Europe. Russia was, of course, quite outside this line of progress, and in North Africa and Eastern Asia indigenous forms of architecture existed better suited to the climate than the style of Northern France.

It was a sacred duty with the monks to labor with their own hands in the building of their churches and conventual buildings. Each brother, from the abbot to the humblest, deemed it a pious duty to aid in God's work by building churches in His honor. The identity of the Gothic style throughout Europe is primarily due



to this cause. But after the monks came the lay builders, trained originally under monastic direction, who, like their predecessors, traveled from one part of Europe to another, each with his own rules of design and of construction, peculiarly his own property, and likewise helping to distribute a single style of architecture over wide areas. And though local differences quickly sprang up, though nationalistic forms speedily developed, the lay workers never lost their influence, and only disappeared when the Gothic ceased to be a living style, and the formal

century; the secular bishops carried it to its utmost logical point in the thirteenth. Yet the building of monastery churches did not die out; the abbey church of St. Ouen, in Rouen, one of the latest Gothic churches in Europe, is larger than the Gothic cathedral of that city.

In the thirteenth century the cathedral was the center of the life of the city. Its huge walls towered high above the surrounding buildings, and travelers were first assured of their approach to a city by the spires and towers in the distant landscape. The market-place of the town, in many instances, was directly in front of the great cathedral porch, so that it was to care for the next. The church was



FROM THE SOUTH PORTAL, LE MANS.

was used alike for theatrical spectacles and for the holiest ceremonies of religion, without thought of profanation or fear of pollution. The bishop was a civil and ecclesiastical personage. In every city his rights, privileges, and powers exceeded those of any modern bishop, and in many he was the sovereign himself, and ranked with the lordliest peers of France. Popular interest and fellowship in the cathedrals and in the hierarchy they represented was thus commanded on every score. Religion, common interests, political privileges, such as they

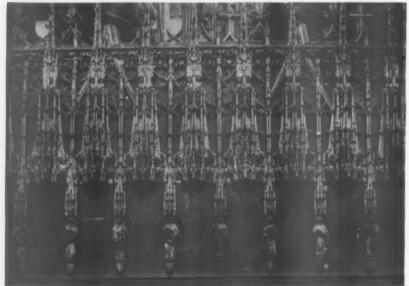
period which preceded the Renaissance were, a sense of common property, all began. Cathedral building, the buildings these united the people and the church in of secular bishops, succeeded monastery the strongest bonds. People went to the building, the buildings of the religious cathedral to worship, to receive the sacraorders, just as the lay workers succeeded ments of religion, to witness holy miracle the clerical laborers. The monks began plays, and even to indulge in sports and the architectural revival of the twelfth pastimes of a more profane nature. They went to the priests for learning, and gained such knowledge as they had in the retirement of the cathedral cloister, the forerunners of the universities and the modern schools. The noblest use they made of their artistic talents was in glorifying God in decorating and beautifying His churches. If they were sick, the church cared for them. If they were needy, the church ministered to their wants. If they were in trouble, and sought safety from the avenger of evil, the church offered them an asylum. If they had occasion to take long journeys, they found food and beds at the monastic houses along the highways. The church but a step from the business of this world entered into every phase of life, took part in every human interest, surrounded the public meeting-place and town-hall; a people with every care and every necesplace of resort as well as of worship, and sity. It is no wonder that under such



THE CATHEDRAL OF TOURS.

edifice before nor since has had, or perhaps can ever have. This is its real meanstone bulk of its structural fabric.

conditions, and in such a society, the engineering. Every portion of a well building of cathedrals should have been ordered Gothic structure performed a usethe occasion of great outbursts of popu- ful and necessary function. The high lar enthusiasm, nor that the cathedrals vaults of the nave were the fundamental themselves should illustrate most com- element. These must be high enough to pletely the life and spirit of the times. permit the introduction of windows be-The medieval cathedral had a social and neath them that would admit light over political signification that no Christian the roofs of the aisles. This was the great architectural problem of the Middle Ages. and Gothic architecture was developed ing, and this still lives in the solemn, cold in striving to solve it. How this was done and where and why, we need not And the mystery of the cathedral is stop to inquire. But it is useful to keep the greater when one remembers that this in mind the fact that the buttresses and wonderful medieval life, which we only flying buttresses, which, in the hands of



FROM THE CHOIR, ALBI.

half know as yet and which we can scarce the French builders, became so marked an understand, much less appreciate in this ornamental feature, performed the useful so different age, was expressed with a and necessary work of carrying the vault marvelous imagery of art and architecthrusts, which were further held in check ture, with a vividness of imagination, a by the pinnacles placed on the buttresses. care and attention to detail, a superbness The walls in a thoroughly developed of artistic resource that have never been Gothic church—thoroughly developed, surpassed if, indeed, they have been ap- that is, in the sense of illustrating Gothic proached in any time. Yet, wonderful principles in their fullest phase of develas the art of the cathedral is, it was no opment-are mere curtains between the mere wanton exercise of the imagination. buttresses. It thus became possible to Every part of the most complicated cathe- introduce windows of great size, wholly dral was carefully adjusted to every other, filling the space between the buttresses, was as nicely calculated and as boldly and reaching quite to the vaulting ribs executed as any notable piece of modern in the aisles and the clearstory of the

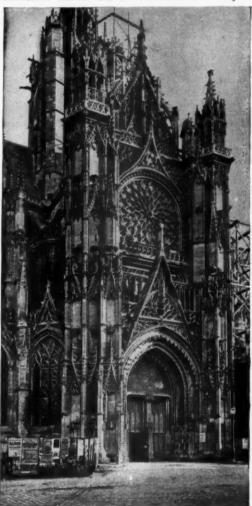
ple of building was the concentration of weights and thrusts upon certain strong structural points, which, in the church, were the buttresses. This accomplished, it was the builders' task to give this structurai frame an artistic form, which should make it beautiful without hiding its structural nature.

plished every student of architecture hands. Above is the division of the façade,

and every traveler in France is thoroughly aware. In the purest Gothic the construction is never hidden by the ornament, but the ornament helps the construction, points its meaning, gives it signification. Truth is never ignored nor are pains taken to hide what might readily have been masked behind ornamental screens. The familiar and majestic front of the cathedral of Notre Dame of Paris is the type of many similar fronts. The triple division of the body of the church into nave and aisles. the latter in this case being doubled on each side of the central bay, is shown in the triple division of the front, with its central portion flanked by two towers. The doorways are wide-spreading, open porches, inviting all who will to enter without let or hindrance. Sculptured statues of saints and virtues form a natural and appropriate decoration to the walls of these porches, while the dramatic scenes sculptured over the doorways themselves point further lessons of faith and hope. The Last Judgment, the most solemn and awful fact in Christian theology, fills the space over the central doorway, an enduring warning to the wayward. a constant reminder to the faithful. A gallery of sculptured figures of the kings of Judah is carried across the front over the portal open-

The fundamental Gothic princiings, and marks the dividing line between the upper and the central portion of the façade.

In the central section the triple horizontal division is marked with equal strength by two windows in the tower divisions, and by a circular or rose window in the middle-a form of opening which, while not exclusively French, re-How successfully this was accom- ceived its finest and noblest form in French



TRANSEPT DOOR, EVREUX.

a high gallery of open-work arches stretch- tion. Its vast west front is a miracle of monious design. Over all rises the first section of the towers, with their double, long twin windows of exquisite proportion and design. Nothing could be simpler, yet it is one of the most sublime creations of the architect's work in the whole world. It served as the type of many west fronts of other cathedrals built about the same time. A more varied form is found in the cathedral of Laon, a richer aspect in the cathedral of Amiens, and its most sumptuous expression in the cathedral of Reims: but notwithstanding the irresistible grandeur of the later forms. one returns again and again to Notre Dame with renewed satisfaction in its beauty, with renewed enjoyment of its chasteness, with renewed appreciation of its solemnity and its dignity.

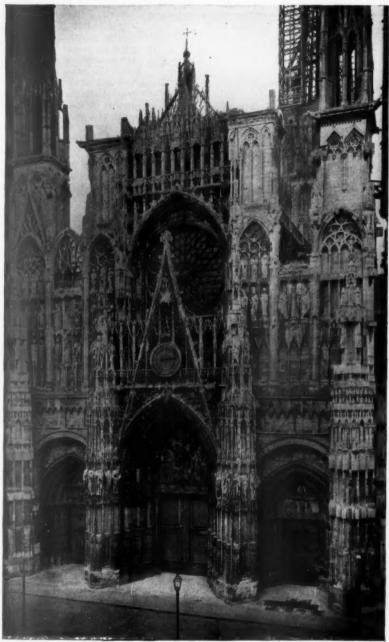
ing across the front from tower to tower, architectural sculpture, and illustrates the binding the whole into one complete har- utmost steps taken by the Gothic builders in the structural decoration of their churches. For lavishly rich as this ornament is it closely follows structural lines. and is kept closely within the bounds of architectural limits. In general idea the west front of Reims is identical with that of Notre Dame, the chief difference being in the transference of the king's gallery from immediately over the first division to the crown of the façade. The porches are deeper, more wide-spreading, and grander than those of the cathedral of Paris. The recessed walls are decorated with stately statues of saints placed on The interior surfaces of the pedestals. high portal arches are filled with innumerable figures of the heavenly hosts, each with its own base and canopy. Strangely enough, the tympanums over Of all the cathedrals of Europe that of the doorways have no sculptured scenes: Reims is the richest in sculptured decora- the Last Judgment, which should accom-

pany the figures in the arches of the central doorway, was never carved. The space over all three doorways is filled with glass, an unusual arrangement in itself, but especially so in a church which, like that of Reims, is so richly and marvelously carved. But the cathedral has its sculptured Last Judgment over a walled-up doorway in the north transept, and it is one of the most refined and noble interpretations of this great Christian event given by any medieval artist. The whole of Christian theology, and life, and hope might almost be said to be carved upon these doorways, and in language that needed no schooling to understand, in words that needed no preacher to utter them, in symbols that required no mystic meaning to adapt them to their place and their work

We can scarce understand, even in this day of medieval research and knowledge, the appearance of a great cathe-



CHOIR SCREEN AND SIDE AISLE, AMIENS.



THE CATHEDRAL OF ROUEN, WEST FRONT.



cause, the greatest of them is but a reflection of its former self in the heyday of its prosperity and popularity. The art of the Gothic church was so perfectly balanced, each form of decoration so helped each other form, and all together so thornumerous splendid windows, and, most Before these monuments of art degrees of

superb of all in this respect. the cathedral of Chartres still retains most of its original glass in its one hundred and twenty-eight windows. But, with the exception of this last cathedral, it is quite impossible to obtain to-day a correct notion of the interior of a medieval cathedral in its original and unchanged beauty. The sculpture and the glass were the two chief forms of decoration in the interior, but gaily-colored tapestries were hung between the columns on festal occasions, the altars were covered

with richly-jeweled furniture of solid gold, encrusted with the rarest genis. the garments of the bishops and the priests at the altar added to the splendor of the effect, to which the rich and varied costumes of the worshippers were an important adjunct.

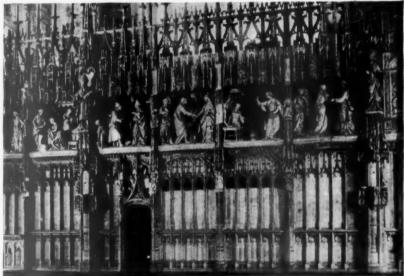
But, if we cannot now reproduce the actual appearance of the cathedral in dral, as that the Middle Ages, we can still enjoy their architectural form, still appreciate a feast day or the majesty of their lofty vaults and upon some high, soaring arches, still walk the public festi- aisles through which twenty generations val. The rav- have walked, touch the stones they ages of time have touched, see the forms they saw, have not been experience, if we will, the emotions they kind to these experienced when the worship of God great build- was surrounded with all the artistic work ings, and some will tell us that the of an artistic age. Among so many it is hand of the restorer and the improver difficult to choose a type, hard to say this has been more harsh. But, whatever the and this alone is the finest of them all. The cathedral of Paris, with its double aisles on each side of the nave, and an outer row of chapels beyond-practically a seven-aisled church; Laon, with its single aisle and its chapels and its gallery over the aisles-a feature, by the oughly made up the whole, that injury to way, that exists in the cathedral of Paris; a part was injury to the whole, and the Chartres, with its single aisle, without disappearance of one subsidiary art ma-chapels; Amiens, similarly planned, with terially altered the effect of those that chapels; Bourges, double-aisled, with remained. No greater calamity has be- chapels; Tours, and Rouen, and Coufallen the cathedrals of France than the tances, each with single aisles, and many loss of their stained glass. Much yet re- more similarly planned, each has its mains: Reims itself still has a goodly own majesty and dignity, each its own quantity, that of the choir of Tours is claim upon the reverential student, each still intact, Le Mans and Bourges have its own individuality and impressiveness.

comparison fade away. called into existence.

and of progress. of the popes, yet it had scarcely closed when the papacy had fallen so low as to tically completed within a very few years. begin the "Babylonish Captivity" at

One can but ecclesiastics, in rulers, the century stands drink in the beauty of each, learn its les- out in the pages of time as one of the sons as best one may, and carry away from most notable and brilliant in history. them lasting lessons of the power of re- And, with all this ceaseless activity, ligion and the marvelous works it has with all this beginning of a new order of things, this generation of thought, this The thirteenth century was one of the upheaval of society-for such it was in most brilliant in the history of humanity the end-there was, in France, an un-The two final crusades exampled activity in church building. were preached and fought in it. Its first Cathedrals that astound us by their treyears comprised the reign of the greatest mendous size, not less than by their wonderful art, were projected, begun, and prac-

Pilgrims gathered from all parts of Eu-Avignon. Nearly every state of Western rope to take part, with their own hands,



CHOIR SCREEN, CHARTRES.

Europe then laid its foundation of representative government. Feudalism all but reached its end, and the modern spirit first rose in the breasts of men. The commercial towns of Northern Europe reached unexampled heights of prosperity and greatness. Many of the greatest sovereigns, true kings, imbued with the truest kingly principles, ruled beneficially and well. Its roll of great men included St. Bonaventure, St. Domand Roger Bacon; Simon de Montfort, plains below them. and Stephen Langton. The great conti-

in the building of the cathedral of Chartres. The populace of Laon spared neither enthusiasm nor labor in rebuilding their cathedral, and to perpetuate the part their horses and oxen had in the work-for the city is on a high and steep hill-they placed images of their dumb helpers in the towers, whence for six hundred years they have looked down upon the doings of men, upon the making of history, upon the progress of events as the great inic, and St. Francis of Assisi: Dante human drama has been enacted on the

Generally speaking, the bishop had four nental universities took their rise. In chief sources of revenue that were applipolitics, in education, in philosophers, in cable to the building of his cathedral.

contributions of the cathedral chapter, and especially of its dignitaries and officers, and, lastly, special donations made for the building of the cathedral.

The balance-sheet of a cathedral of the thirteenth century is too fragmentary a document to enable us to make any just estimate of the actual sums received or of the source whence they were obtained. Gigantic as the funds that were needed must have been, they seem always to have been forthcoming, and many a modern church builder, at his wit's ends for money and supplies, must look with regret upon the medieval bishops, who could gather the vast sums needed for their tremendous enterprises. That there was no limit to their necessities, and that they were not backward in soliciting donations, is evident from the letters of appeal to other dioceses that have been obtained in foreign parts. Apparently nothing was left undone that could hasten the work, and while in some instances

These were the episcopal revenue in it- many of the cathedrals, enough money self, from the episcopal estates, the ofter- was obtained, and that in a quantity and ings of the faithful of the diocese, the within a duration of time that seems almost marvelous to modern minds, to accomplish lasting and superb work in architecture.

Family pride, and the desire to associate one's name in perpetuity with the cathedral of one's native town, led to the custom, from the close of the thirteenth century, of endowing chapels, by willing to the bishop and his chapter sufficient money to pay for building a chapel and maintaining a priest in connection with While to-day the side chapels that crowd the aisle walls of most of the medieval cathedrals seem integral parts of the edifice, they are really, most of them, additions of the fourteenth and fifteenth centuries, and the observant traveler may. if he look sharply enough, discern the outline of the primitive buttress in the upper portion of their walls.

The plan of the French cathedrals folpreserved, as well as collections made and lowed the usual cruciform type, but embraced many special points of its own. The most important of these was the clustered apse, or chevet, to give it its the original plans subsequently proved French name. The characteristic English too large for practical execution, while east end is a flat wall, with a large win-signs of economy may still be traced in dow of painted glass. This is also found



INTERIOR, REIMS.



WEST FACADE, RODEZ.

in France, the cathedral of Laon, together with a number of smaller churches in the same district, being closed in this manner. But the chevet was the special French method. The end of the choir was drawn as a semicircle or polygon, and around this a group of chapels were built, opening into the church, and forming a striking and beautiful ending to the architectural perspective of the nave, and incidentally calling for the exercise of great ingenuity in the arrangement of the vaults around the circular or polygonal aisle.

The towers were another feature that had special treatment at the hands of the French builders. The normal French plan provided for seven towers, two on the west front, two on each of the transept fronts, and a central spire. Unlike the usual English system, this central tower was usually a small, slender spire, of which that of the cathedral of Amiens is a good typical example. It simply marked the center of the church, and was quite without the structural significance of the English central tower. But, if the French did not develop this feature, they far sur-

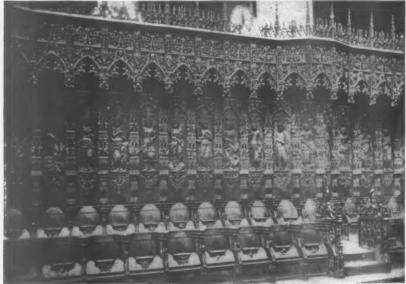
passed their insular neighbors by the strength and dignity of the façade towers. These were strongly developed, and were intended to be crowned with spires, though those of Notre Dame, and of many another cathedral, were never completed. Sometimes two additional towers were added beyond the transepts, making nine in all. Unfortunately, this splendid scheme was never carried out in its entirety in any church. The nearest approach we now have to it is seen in the cathedral of Laon, whose many spireless towers form a picturesque group of unusual beauty.

English cathedrals have, perhaps, a closer interest to Americans than the French, because their history and their forms are more familiar to us. Yet this interest is solely one of association and of custom, and rests on no real basis. English and French are alike the product of the same intellectual and religious movements, churches of the same religion, inspired by the same motives to a large extent;—there is no reason why a greater familiarity with the one should blind us to the overpowering artistic value of the other. Nor are associations

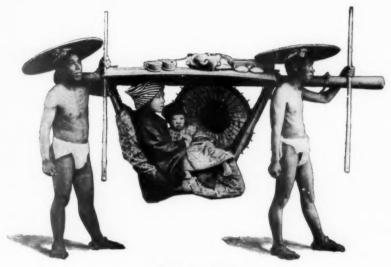
French cathedrals have a tragic interest of even greater moment. The close of the last century, which witnessed the overthrow of the monarchy of France. all but witnessed the overthrow of its cathedrals. Many were condemned to be sold; in many the sale was consummated, and the cathedrals of Arras and of Cambrai were actually destroyed in the imaginary march of modern improvements. Yet the physical injury done these buildings was small, in one sense, though actually enormous in amount, to the indignities put upon the religion that produced them. The orgies of pagan Rome did not surpass in vindictiveness and debauchery those the newly-made pagans of the Revolution perpetrated in the holy places of Christian religion. The Church of God became the Temple of Reason, in which, by that strange inversion of fact and motive which characterized the Revolution, the wildest and most unreasoning scenes were enacted. Singers of the opera held high carnival at the altars of the Most High, and churches that once had been thronged by pilgrims were crowded by the men

less noteworthy. The English cathedrals have a sentimental interest; the France and of Europe by seeking inspiration from women of the town. God est of even greater moment. The close of the last century, which witnessed the overthrow of the monarchy of France, all but witnessed the overthrow of its

These came to an end almost as suddenly as they had begun. The indignities put upon religion were forgotten, the polluted churches purified, but the structural harm was irreparable. Broken statues and carvings, destroyed windows, dismantled altars, looted treasuries, met the eye on every hand. Much has been done in this century to repair these damages, but the pristine glory of these buildings has gone forever. But for what we have we may be thankful. The reaction came in the nick of time. Had the disorders of the Revolution been continued a few months longer, a hundred cathedrals would have been swept from the earth, and modern art and modern men been without some of their noblest inspirations, some of their greatest treasures, some of the most remarkable monuments of a time in which art and religion enjoyed a closeness of interest and of fellowship that has never been equalled.



THE STALLS, AUCH.



THE BAMBOO.

By J. FORTUNE NOTT.

given them close enough study to note the various ways in which nature has been bountiful to them, will be somewhat puzzled to give a definite reply to the question: "What is the most useful gift nature supplies to the hand of civilized or only partially civilized man?" Certain books and certain types of schoolmasters have, of course, settled the matter in that dogmatic style for which they are renowned. But experience does not always corroborate the decisions they enforce in so emphatic a manner. In the animal world, the bison, or so-called buffalo of America; the vak of Thibetan plateaus, and, in arid lands, the camel claim attention, for by their means men have been able to sustain existence. Then, springing from the soil, certain trees have to receive consideration, among which the cocoanut-palm stands preëminent. After giving the subject mature deliberation, however, those who are qualified to form an opinion must, we think, ultimately arrive at the conclusion that the bamboo is entitled to the posi-

The cocoanut-tree, as far as my ex-

TRAVELER who has seen many perience demonstrated, could only yield people and many lands, and has domestic articles that were of a compara-



A BAMBOO GROVE.

tively rude description, such as would be required by people content to live in one-roomed huts made from its leaves. With the exception of a few ornaments made from the polished shell of the cocoanut and certain variations in the patterns of the coir mats, no object that claimed attention for its artistic merits came under my observation. But the case was very different in all countries where the bamboo was utilized. There the fact was generally obvious that the people possessed an intuitive and cultivated love of beauty, which led them to seek out or make surroundings in harmony with their desires in this direction, and that bamboo readily lent itself to their requirements in obtaining such results.

The bamboos, for there are many varieties, constitute a genus of arborescent grasses, which are to be found in nearly every tropical country. They vary in size from slender reeds to tree-like growths, often reaching a height of seventy feet or upwards, with a stem over fifteen inches thick, and even, in exceptional cases, measuring considerably more than this. The stems, which taper from

Nearly every variety of the bamboo is utilized in the country where it grows for some purpose or another, but the largest species, known as the bambusa arundinacea, which is also the most common. can be applied to so many useful purposes that to refer in detail to a tithe of them would be wearisome.

The stem of this bamboo is surmounted by light, feathery leaves, which give a most beautiful effect to the groves wherein it is cultivated. It grows very rapidly, sometimes at the rate of a couple of feet a day. It was this peculiarity, in conjunction with its strength, that enabled the old Ceylon chiefs to use it as the means of torturing and executing their prisoners. Binding the unfortunate men to the growing shoots, in a few hours' time the pipe-like stems had either pierced their bodies or rent them asunder.

The bamboo can only perhaps be seen in perfection in South America, India, and the tropical islands of the world; but the ingenuity and love of beauty which characterize the Japanese enable them to convert it to a far greater number of

> serviceable and ornamental purposes than can the untutored natives of the other countries wherein it grows. Certainly no other part of the world can show such a wonderful adaptation to the wants of the people in any other natural product. It supplies nearly every requirement outside of food and clothing, and even to a limited extent these are provided



the septa in the interior being air- and water-tight, and their position marked on the exterior of the canes by nodes. The nodes do not occur at regular intervals, being often only a few inches, and sometimes several feet apart. It is therefore necessary to carefully notice the length for any special purpose.

It is quite easy after a short stay among a race who use bamboo to understand the feelings of the man Colonel Yule refers to in his translation of Marco Polo's travels, who readily believed all the wonderful things told him about Europe and its people, but, nevertheless, could not conof the internodes when selecting bamboos ceive how it was possible for human beings to exist in a land destitute of these



A DYKE MADE OF BAMBOO BASKETS FILLED WITH STONES.

bamboo does not grow so readily as in India, or all Southern Asia, by careful cultivation it is made to attain very nearly the same size, and with extra care even exceed in dimensions the largest specimens to be found elsewhere. Here the bamboos do not, however, blossom or produce seed, as those varieties grown in India are known to do at varying intervals. As light and air are essential to their proper growth, the canes are planted in places bordering high roads or rivers, on the outskirts of forests, and in temple groves. In these positions they are made to add considerably to the graceful beauty of the Japanese landscapes.

The qualities which render the bamboo applicable to so many useful purposes, and in which it surpasses all other woods, are its straightness and length; its elasticity, strength, hollowness, smoothness, lightness, and roundness, as also the ease with which it can be split, and the regularity of its cleavage. Then, in a minor them not hitherto degree, comes the fact that it imparts no smell or taint to water, which allows it occurrence during a to be used in constructing drinking- traveler's sojourn vessels of all descriptions and for conduits. Its quick growth, its abundance, ous people. and the ease with which sizes can be

Although in Japan the large matched, are also factors that cannot be overlooked. As a result, it is said, of free silicic acid existing in the cane, it is hardened and given a capability of resisting many of the destroying influences to which other woods are prone.

Nature, in this wonderful boon she has given man, seems to have omitted no element that in any way could add to its utility. Certainly it would be difficult to think of any article of human want in which strength, lightness, or elasticity were necessary to which the bamboo has not been adapted. In all the cities, towns,

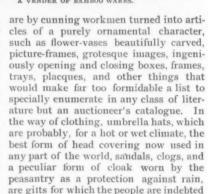
and villages of Japan there are numerous shops, in certain places whole streets of them, wherein bamboos, in some form or other, are exposed for sale. And the discovery of new methods of using seen will be a daily among these ingeni-

In the bamboo, the BAMBOO FLOWER-VASE.

Japanese possess a source from which all the materials necessary in the construction of a house are to be found, and not only this, but also all the furniture required, and the requisite pipes and cistern, for supplying it with water. The strength of the light scaffolding they erect with these canes is astonishing, for it seems capable of bearing any weight that can be put upon it. The way bamboos are used for roofing is most ingenious. A selection is made of the largest and straightest stems, which are then cut to the length necessary to reach from the ridge to the eaves. After this, they are cleft evenly in halves. The first layers are fastened

in position close together, with the hollow side uppermost, then the next layer is made by reversing the process, placing the bamboos hollow side downwards in such a manner that the split edges fall into the two contiguous concavities. In this way the roof is made water-tight, and the rain drains off in the gutters formed by the under layer of bamboos.

Matting, furniture, screens, blinds, baskets, washing-basins, baths, buckets, ladders, brooms, stools, trays, cooking utensils, and other domestic articles are all easily made from some part or another of these extraordinary grasses. So are pipes, tobacco jars, walking-sticks, fans, umbrellas, combs, spoons, flutes, and



to the bamboo. Bamboo harnesses and panniers for horses and oxen are also very frequently Piping for drains or conduits, made from the largest sized stems, is

in universal use in the small towns and villages. These pipes are made by fitting selected bamboos together by wedging them firmly one in another until the length required has been reached. The divisions in the stems have, of course, to be first cut out or pierced in such a way that the water can readily flow through them.

The smaller kinds of bamboo are used for protective



A VENDER OF BAMBOO WARES.



WEAVING BASKETS OF BAMBOO.

purposes. With their points sharpened, they are fastened above the fences after the fashion of the ordinary iron chevaux de frise, and form just as formidable an obstacle for thieves to overcome as the more elaborate article. Then the most powerful bows and penetrating arrows that can now be seen are constructed from bamboos, and the Japanese are very skilful in their use.

For works that may be classified as of a public nature, such as road making. fencing, river damming, and bridge building, the bamboos yield the necessary material. In some places, as a temporary measure, the coarse stems are laid together for a road, after the method known as corduroy in America. Safe, simple, and easily constructed dams and river banks are made by a number of broad baskets, bolster-shaped, constructed with bamboos. These baskets are filled with stones, and placed side by side at the place where they are required. Disastrous floods in the winter season are frequently prevented by this simple and inexpensive protection to the river banks, and as it answers the purpose in so admirable a manner, it must afford great protection to all property through which mountain streams seek their outlet.

Bamboo bridges are now and again to be seen, but they are of such a shaky and slender construction that more faith than a stranger to the island can have in the strength of the bamboo is required to make them a comfortable method of crossing a river. Sometimes only a single bamboo, four or five inches in diameter, forms the pathway, and another cane of a more slender variety is slung above it at a height that allows it to be used as a hand-rail, but it rarely possesses any firmness. The country people, however, readily avail themselves of these simple bridges, even when they are thrown over a raging torrent, and, apparently, have no more apprehension of danger when crossing over them than they would have in a ferry-boat over a placid stream. These bamboo bridges furnish a practical illustration of the extraordinary strength these canes possess, for it is said that no other wood known of the same thickness could possibly stand the strain which is sometimes placed upon them.

It is currently reported that the Ceylon huts enjoy their immunity from destruction by lightning as a consequence of the cocoanut-palms surrounding them being good conductors. This is certainly an



A BRIDGE CONSTRUCTED OF BAMBOO.

island where, at certain seasons of the year, terrific thunder-storms are of frequent occurrence. In their power of giving protection to the people from natural dangers peculiar to the locality in which they grow, however, they in no way can be said to surpass the bamboos. In Japan the greatest danger apprehended comes from earthquakes, which not only destroy buildings, but open up the ground. Earthquakes, however, are such ordinary events that only very violent ones produce any consternation, for the houses, being built in a light way by a free use of bamboo, are not very dangerous, even if shaken down. In remote country districts, the people living adjacent to bamboo groves are said to rush there at the first premonitory warning that an earthquake is likely to be more than usually violent, for they have discovered that the tangled network of interwoven roots these grasses shoot out in every direction affords a reliable support, even when the earth splits and yawns beneath.

Although there is no species of bamboo which is known to yield any product that has, up to the present time, been introduced into the Materia Medica of western

admirable quality for them to have in an countries, yet all over the East a silicious fluid concretion which is found in the hollow joints of this and other large grasses, and known as tabasheer, is highly valued for its febrifugal qualities. Hitherto, however, the pharmaceutical societies of the world have refused to believe in its efficacy, and assign this as the reason it has been ignored by them. It is, nevertheless, well known to scientific men, for it possesses certain peculiar optical properties. It is the least refractive of all known solids. Tabasheer somewhat resembles that peculiar variety of opal which only becomes translucent on immersion in water, and is known as hydrophane.

The bamboo supplies, in its young and succulent shoots, a vegetable which is in universal use, and is frequently to be seen on the menus of hotels, and the dinner-tables of the foreign residents in the treaty ports. It is often compared to asparagus, but there are few who taste it for the first time, who do not think the comparison libelous. Nevertheless, bamboo sprouts are not bad eating, either as a vegetable or in the form of pickles or preserves.

The reed-like stems of the smaller varieties of the bamboo are used for pens,



BAMBOO WARES FOR SALE.

and by macerating the ends can be made into brushes, such as the Japanese employ when writing their Chinese characters. The wood is also employed in providing the people with a cheap form of abacus or soroban, as the article is called with which the Chinese and Japanese, by dexterous movements of beads, strung in rows of five, make those quick and accurate calculations which so puzzle strangers.

Among the canes, plants, and tree products which contribute to the list of articles available in the manufacture of paper, bamboos must AN UMBRELLA-STAND MADE OF CURIOUS also be enumerated.

And in this way their sphere of utility is considerably enlarged, for the tough, there in a variety of ways, and for numerous purposes which are not elsewhere seen or even considered possible.

Some of the most ingeniously made articles to be found in Japan are those wherein the bamboo-workers have sought to adapt some one or other of the cane's peculiar properties to meet the requirements of that western civilization which is now in vogue. Among these articles cigarette cases may be mentioned. They are made by grooving two pieces of the broad canes and sliding them together. The pieces have been sliced from one hollow tube so that when together there is left between them only sufficient concavity to enable cigarettes to be placed therein exactly as they are in any ordinary case. By this means bulk is avoided, and the article becomes available for the pocket. Some of these cases have a place made for matches, and besides being finished in the remarkably neat way peculiar to nearly all Japanese work, are in many instances beautifully carved with representations of birds or bamboo groves, which their artists love to represent, and can do in so wonderful a way, with a few strokes of a pen or cuts with a chisel.



Ash travs, in fact, trays and stands of all descriptions, display the cleverness and skill of these wood-carvers. By cutting through the stem of a thick bamboo, an inch above and an inch below one of the nodes, a rough tray or receptacle is formed. But the Japanese people will not own anything that has not been carved, shaped, or ornamented; so these rough sections of the cane are chiseled into representations of the lotus-flower, the upper part crinkled in the resemblance of its blossom, and the lower one cut away in such a manner that the supports left resemble in every

particular the stems or tendrils of this beautiful water-plant. Others are made fibrous papers made in Japan are used to resemble the chrysanthemum, but not the sixteen-petal one, for that being the crest of the Mikado, it is a punishable offense to use it in any form, except in making buttons or ornaments for officers, soldiers, sailors, or the police, who are under government control. Trays such as those here described can be purchased in any part of Japan for a few cents, though the more elaborate articles bring eight or ten dollars.

> Beautifully grooved boxes are made by cutting straight pieces of wood out of the thick, curved stems. The sides made from the wood so obtained are dovetailed together with that exactness for which the wood-workers of Japan have deservedly gained a world-wide reputation, the whole forming an article without a rival in its own peculiar line. These boxes also display another feature worthy of notice; for the manner in which the necessity of hinges and catches of any description is avoided, exhibits considerable skill. The Japanese, although in some respects wonderful metal-workers, seem only able to produce the most flimsy imitation of ordinary hinges and locks, and many of their beautiful wood and lacquered cabinets are rendered almost



TOBACCO-BOX MADE PROM BAMBOO.

worthless by the absurdly weak and defective metal work on the doors and drawers.

As every section o, the bamboo has cross-walls in its septa, it follows that a closed vessel of some description can easily be made lengthwise by splitting the cane, or of an upright or cylindrical character by cutting it to the desired manner in which every little peculiarity, and artisans to be found therein.

or even imperfection, of the wood is transmuted by the genius of the carver, into points of beauty or of startling oddity.

But this ornamental or artistic work, beautiful as it may be and attractive to the curio buyer, is only one of the very many ways in which the bamboo is utilized, and certainly not the one which evokes the most admiration when studying the manifold advantages of this wonderful gift nature has bestowed on eastern people. The features which render it available in supplying their essential requirements elicit the most astonishment, and perhaps envy. No western householder who has been a victim to carpenters, builders, plumbers, and others, whose aid necessity has compelled him to seek, but must have some of this feeling, when before him stands a stupendous grass, which enables its cultivator to dispense with all such exasperating and expensive workmen, and vet with the expenditure of a little labor procure the necessary or desired comforts, and even luxuries, without being mulcted pecuniarily.

After close study of the bamboo and its height. As this peculiarity enables it to applicabilities, it becomes easier to underbe readily made into flower-vases, it fol- stand how a country like Japan could lows, almost as a correlative, that the remain closed to all toreign interference most finished and elaborate carving is to for so many centuries, and yet be found be found on articles of this character. to have enjoyed during the time many of Days may be spent in inspecting bamboo the comforts and refinements which were work of this class to be seen in any take- only possessed by other countries who mona bazaar in Japan. It would be fu- had been receiving contributions from tile to attempt a description of the things every quarter of the globe and assimilatthat can there be seen, or of the dexterous ing the work of the most skilful craftsmen



A BAMBOO ORNAMENT.

A PARTING AND A MEETING.

By W. D. HOWELLS

III.

HE grassy-bordered sandy street of the village was silent and empty under the shade of the stiff maples. The on either side of the chaise for some one to speak with; but no sign of life showed itself in the dwelling-houses, or in the gardens above or below the thoroughfare, which divided the slope where the village lay. Sounds of labor made themselves vaguely heard from the shops set here and there along the road; and from farther asked the brother. up the hillside came the stamping of horses in the great barns.

But there was such a stillness in the air, which muffled these noises, that the lovers involuntarily sank their voices in speaking together. "I don't know where clean. A sister came through the carpetto go, exactly," said Roger. "I can't

find anybody.'

"Oh, well, don't let's stop then," Chloe answered. "Let us go right on through. I don't know as I want to stop

very much, anyway."

He did not hear her, perhaps, or perhaps his curiosity was now piqued, and he was not willing to go further without satisfying it. He was craning his head round the side of the chaise and looking back at the doorway of one of the buildings.

"I thought I saw some one in that house-at the door."

She looked back, too. "Why, of course! That's the office. I remember it just as well! I don't see what I mean, acting so. Turn right around, Roger! That's where they entertain strangers. What could I be thinking of?" Her tremor of reluctance, whatever it was from, was past, and she urged him to a feat which had its difficulties. He turned and drove hack

On the threshold of the building where they drove up, a Shaker brother was standing.

"Sir, good morning!" the young man called politely to him. "Could I put up my horse somewhere? We should like to see the village, if you allow strangers."

"Yee," said the brother. "I will take lovers drove slowly through, looking out your horse," and he came down the steps

to the horse's head.

Roger helped Chloe out, and he saw that her eyes were red and her cheeks blurred from the tears she had shed. "Wouldn't you like some water?" he whispered, and she gasped back, "Yes."

"Could we get some water inside?" he

"Yee: you can go into the office with the young woman. The sisters will give you some water. I will see to your horse."

Within, it was all cool, and bare, and



Drawn by C. Y. Turner.

"ON A TABLE WERE SOME SHAKER BOOKS AND PAPERS."

less hallway toward them and offered to show them into the little parlor beside the

door.

Chloe looked at her, and then, after a first timid glance, broke into a smile. "I used to come here with my grandfather, Squire Pullen, when I was a little girl. Don't you remember me?"

"Nay," said the sister, briefly; but she let her eyes wander from the girl's flushing face to the young man's with a demure

and not unfriendly interest.

"Well," said Chloe, "we wanted to see the village if we could, and I should like somewhere to fix my hair; I'm afraid it's coming down."

"I will take you to a room," answered the sister; and she nodded Roger toward the parlor door. "You can go in there."

It was cool and clean, like the hall, and it seemed as bare, though there were chairs and a settee in it, and some hooked rugs on the floor. There was even a looking-glass, and on a table, under it, were some Shaker books and papers, a life of Ann Lee, and a volume of doctrine. He took this up, and he had it in his hand when Chloe returned with the sister, smiling, and blushing, and looking very gay and happy. "This is Mr. Burton," she said. "Mr. Burton, this is Sister Candace."

The sister smiled and stood apart from the pair, looking them over, and taking in the fashion of their worldly dress, as well as their young beauty. But she did not say anything, and Burton, after a formal profession of his pleasure in making her acquaintance, had to leave the word to Chloe, who kept talking, and would not let him appear awkward. After a moment, the sister said: "I will go and see to the dinner," and then Chloe ran over to Roger, and hurried to say, under her breath: "I had to tell her, because I knew she would guess it anyway; and she knows grandfather, and I didn't want her to think that I would go wandering about with just anybody; I saw she wanted to ask; and she was so pleased. I had to tell her all about you, and I don't believe but what she thinks you're pretty nice-appearing, Roger. I could tell by the way she looked at you. But, of course, she couldn't say much. Do I look now as if I had been crying any?"

He glanced at her face, turned innocently upon him. "You don't look as if you had ever shed a tear."

"Well, I can't believe I ever did."

"I wish I could believe I hadn't made you."

"Oh, pshaw! You didn't. I was just nervous. I cry too easily. I have got to break myself of it; and you mustn't think it means anything, because it doesn't. Don't you suppose I knew just what you meant? I did, perfectly well, all the time." She put out the hand that was next him, and gave his a little clutch, and after that she began to talk in a very loud voice about the things in the room. From time to time she dropped her voice, and once she explained in an undertone that she had asked Sister Candacewhether they could have dinner. "I didn't know but you would hate to ask," and Roger said Yes; and hewas much obliged to her.

"You know, I'm so used to their ways; or I used to be; but I could see how it took you aback when they said just Yea and Nay, to you. You mustn't mind it; they do it because the Bible says to. They do say Yee, but that's just the way

they pronounce it."

She patronized him a little from the pinnacle of her early familiarity with the Shakers; and explained what the office was, and how it was for business and the reception of visitors from the world outside.

"Then you don't suppose they will let us go into their family houses," he said

rather disappointedly.

"Why, I'll ask Sister Candace when we're at dinner," Chloe answered consolingly. "I don't believe they let everybody, but I guess they'll let us. They think so much of grandfather."

An old man came out of the doorway across the hall, and looked in upon them. "Is this Friend Pullen's granddaughter?" he asked. He had a shrewd face, but kindly, and he spoke neatly, with a Scotch accent.

"Yes!" cried Chloe. "And I remember you, Elder Lindsley. You haven't changed at all, since I used to come here with grandfather. Did you know me?"

"Nay," said the elder. "They told me in the office. I am very pleased to see you. You are quite a young woman." He spoke to her, but his eyes wandered to Roger.



Drawn by C. Y. Turner.

"'GIVE TO HIM THAT ASKETH,' THE SISTER RETURNED."

Hers followed them, and she said: "This is Mr. Burton, Elder Lindsley; and we're—he's never been in a Shaker village before—and I thought—he teaches the academy at Birchfield—and do you suppose we could go into some of the family houses?"

"Oh, yee," the old man answered, and he gave Roger his hand. "We shall be very pleased to have you. They said that you were engaged to be married to the young woman."

"My!" answered Chloe, "has she told already!" and she laughed, while Roger blushed, and mumbled a confession of the fact.

"Well, you must come and see how we live in our families without being married."

"I have been reading something about your system here," said Roger, and he looked down at the volume of doctrine on the table,

"I suppose it appears strange to you," the elder returned. "But we try to live as Jesus Christ lived in all things. If you are a teacher, you will have read a great many books"—

"Not so very many," Roger interposed, modestly.

"And you will know that we are not so singular in our way of life as the folks around us have imagined. We are of an order which has appeared in every religion."

"Yes, I know," the young man admitted. "It is the same principle that has led men out of the world in all ages. I understand that."

"Yee. The inspiration of the angelic life has never ceased, and you find its effect in the celibacy of the Buddhists as well as the Roman Catholics, and the Essenes of the Hebrews."

Chloe looked at Roger with a novel awe for him as one to whom such esoteric things could be intelligibly spoken. Perhaps a little fear mingled with her pride; they removed him from her, and she brightened when, after the talk got farther away, Sister Candace appeared at the parlor, and brought her the hope of getting it back to familiar ground again.

The elder said promptly: "I hope you

have asked the young friends to stay din- be among them with the young man she ner with you, Candace."

"Nay," said the sister. "But we have got them dinner."

"They must be your guests," said the

"Yee; we shall be much pleased," she returned.

"And after dinner," he said to Roger, "some of the sisters will show the young woman and yourself through the family houses. We shall see each other again

before you go."

He went out, and the lovers followed the sister to a stairway descending to a basement at the end of the hall. Roger looked round after the old man. The sister explained to his returning glance, "Elder Lindsley eats in the church-family house. He is one of the ministers."

She took her guests into a room where a table was laid with such abundance, simple and wholesome, that Chloe cried out at the sight: "Why, you look as if you had been expecting us, for a week,

Candace!"

"We are always expecting some one," said the sister. "At least, we are always prepared."

"Do you mean," the young man demanded, "that you give meals to any who come to you?"

"Yee. Give to him that asketh," the sister returned.

They seemed to be alone in the room with her; but if Chloe looked round, it was to glimpse, at a half-opened door, some vanishing face which had been fixed upon herself or on Roger.

When Sister Candace had placed them at table, and gone out to get their dinner in the kitchen adjoining, it was not she who returned, but another sister, and it was still a third who came to take the

things away.

The same curiosity followed them or went before them in the dwellings they visited, after they had finished their dinuer, and the officer-sisters delivered them over to the other sisters. A rumor of their relation to each other seemed to have spread through the quiet communi- haps she knew that she made a charming ty, and stirred it from its wonted calm. picture, and wished to be envied. Perhaps some of them remembered Chloe

was going to marry. They were met everywhere by more sisters than sufficed to show them through the huge dwellings, which they explored in every part, with joyful outcry from Chloe at the perfection of all the domestic appointments. apparent to her housekeeping instincts. She made Roger notice how sweet and clean the white-scrubbed floors were: how the windows shone, and not a speck of dust rested on chair or table, or even quivered in the pure air, which it was a pleasure to breathe. In the kitchen she said she should like to spend her whole life in such a place. She questioned the sisters about their way of doing their work, and their preserving and pickling.

From her superabundant joy in her own fate she flattered them in theirs, and pretended to wish she too could have such a room as many they saw, appointed for two sisters to dwell together, with two white beds, two rocking-chairs, two stands, and a sturdy wood stove, and rugs over the spotless floors. She should like nothing better, she sighed, with a sweet hypocrisy; and she would not appear conscious of her interest for the sisters, singly or in groups, whom they met, and who greeted or pursued her with their eager eyes, as she came up and passed by, in helpless homage to a girl who was engaged to be married, and who would be important from that fact to women anywhere, let alone in a place where nobody ever got married. She put Roger forward when he was not sufficiently evident. She laughed to him in pleasure with this or that; she made jokes to him, and coquetted for him with the sisters.

In one of the great rooms where the family m etings were held, she tried the spring or the floor which had been laid for the marching or dancing of the Shaker worship; and as she stood in the center of the place, with her slender arms stretched out, and her reticule dangling from one wrist, and looked down to find her little feet beneath her deep ruffles, per-

It was at this moment that the old minwhen she was a little girl, and used to ister who had preached joined the group visit them with her grandfather. Perhaps at the door, and smiled at her over the it was enough that any young girl should shoulders of the sisters. The little involtrically to her. She quailed in a deprecation half sincere, half saucy.

"Nay," the old man called to her. "It is no harm. Wouldn't you like to be a Shaker sister, and dance here with us?"

"In this dress?" she cried, putting its worldly prettiness in evidence.

"Yee, if you chose. As long as you wished to wear it we should not object."

"Oh, I never believed the Shakers were so wicked," she said audaciously; and now she left her place, and came and sheltered herself next her lover, who was standing near the minister.

"I was wondering," the old man said, still smiling kindly upon her, "whether you would like to look at the barns, and shops, and gardens. You have seen how we live; you should see how we work."

"I am rather tired," she began, with a

glance at Roger.

"Then the young man would like to

come?" the minister suggested.

"Very much; I should like to come very much, indeed. And I should like to talk with you a little more about your life here!"

Roger had not spoken with so much energy before; there was almost passion in his voice, so that she looked at him in surprise.

A shadow of vexation passed over her

face, but left it fond again. "Well, then, I will wait for you in the office. But you mustn't be very long. They will wonder what has kept us so, at

grandfather's."

"We will go as far as the office with you," said the minister. "It is on our way. I must see the office-sisters, and give them their charges about not trying to make a Shaker of you. They are great hands for gathering folks in."

"Oh, I will look out for that!" the

girl mocked back.

"Well," said the old man soberly, "I should like to have you realize that we are just a large family of brothers and sisters, and nothing else. There is nothing unnatural about us when you come to know us truly."

"I don't think there's anything strange about you, Elder Lindsley," said the girl affectionately. "I used to want to be a Shaker sister, when I was little, and

untary flutter among them spread elec- it's brought it all back. I know that you are just like brothers and sisters, and more so than the real ones oftentimes; and if-if- I know you think you are living the true life, and I only hope you won't look down on us too much, if we can't." She laughed, but the elder re-

plied seriously.

" Nay, you mustn't think we look down on marriage, or condemn it; that is a mistake that the world outside often makes concerning us. Jesus did not marry, but he made the water wine at a marriage feast. He said that in heaven there was neither marrying nor giving in marriage, and Ann taught by her example that there could be no angelic life in marriage, but in freedom from marriage the angelic life could begin before death as well as after death. We do not say that marriage is wrong; and we know that there are many happy marriages, which are entered into from pure affection. I am sure we all wish and hope that yours will be so."

"Oh, thank you, Elder Lindsley. We are both going to try to be good, and if we are not happy-well, it won't be

Roger's fault."

The old man smiled at the gay tears that came into the eyes she turned on her lover. But he resumed with increasing earnestness: "If it were my place to advise you "-

"Yes, yes! It is!"

"Or, if I were to counsel with you, I should warn you against the very strength of your affection. The love that unites young people cannot keep its promise of happiness. It seems to give all, but it really asks all. The man and the woman suppose that they love one another unselfishly; but it is the very life of such love that each should be loved again; and this is not the law of heavenly love. If any one will prove the truth of what I say, let him think of what comes into the heart of the man or woman who loves, and doubts if he or she be equally loved again."

"Yes," said the girl. "That is what I have often thought, and I know that it is selfish. But we can make it unselfish; and we are going to. That is, each one is going to try to live up to a higher

The minister passed this vague exprescame here with grandfather; and to-day sion of a vague aspiration. "All we it has cost us nothing to renounce the think." Adamic order of life. We have had our thoughts and longings for wife, and hus- with the same air of distraction. band, and children, and the homes they their grandchildren around them. Only, marriage is earthly and human, and our gospel relation is divine."

"Oh, yes, indeed!" said the girl, gen-

erously.

They were at the office gate, where Roger and the minister left her. "I won't be long," Roger said. She locked round over her shoulder, after they turned away, and caught her lover looking back. She swept the environment with a lightning glance, and then flung him a swift kiss, and demurely mounted the office steps, and went indoors.

IV.

Burton did not return for a long while. and Chloe, where she sat in talk with the office-sisters, made excuses for him from time to time. At last she saw him through the window at the office gate. Elder Lindsley had come back with him, but he seemed to be taking leave of him is something that requires serious reflection. It is not to be decided rashly."

"I shall do nothing rash," the young man replied. "But if I see the truth"-

a face that made the girl laugh.

say of Shakerism is that it is a city of began. "But if it's late, I'm as much to refuge from self. It welcomes all who blame as you are, I guess. I didn't notice would be at peace; it gives rest. You till a minute ago that it was nearly four. must not think that we are not men and But now I think we better be going. women of like nature with others, and that I don't know what grandmother will

"I will get the horse," said Burton,

When they were in the chaise again, build. Nay, several among us have known and driving away, after as many fareall the happiness that the marriage rela- wells from her, smiled and nodded at the tion can give, and have voluntarily aban- office-sisters, as he would stay for, she doned it for the gospel relation. At the broke out: "Well, I have had the greatsame time, as I said before, we do not est time! Don't you believe, I had to tell condemn marriage. Marriage is the best the sisters all about how we first met, and thing in the world, but not the best thing everything! They were just as pleased out of the world. Few things are more to know as anybody; and they asked pleasing to us than the sight of a young when we expected to be married, and couple living rightly in their order; and whether we were going to keep house, or we honor, as much as any one, a father stay on with father; and how old you and mother dwelling together at the end were, and I was; and whether your of a long life, with their children and father and mother were living, and you belonged to church; and I don't know even in those cases, we remember that what else! I guess you'll think I was pretty silly to talk with them so; and I don't know but I was; but I saw they did want to know so. They were real nice, too; and they did make a set at me, just as Elder Lindsley said they would. They asked me whether I saw anything about their life I didn't like, for they wanted to know oftentimes how it seemed to the world outside; and when I praised it up, and said I didn't see a thing in it that wasn't just as sweet as it could be, and you didn't either, that gave them a chance, and they said the whole family had taken the greatest fancy to us, and why couldn't we come and live with them? I couldn't hardly believe my ears, but they were in dead earnest; they are so innocent. I tried to laugh it off: and I told them we would, maybe, when we were old folks; but they said they had old folks enough, and they wanted young people to join them. They told me all about Mother Ann, and the there; and she heard him saying: "It persecution they used to suffer, here; and about their spiritual experiences; and they talked their doctrine into me good and strong, so that I began to get a little bit frightened, one while; I didn't know The old man lifted his hand in a sort of what they would say next. I guess they deprecation, and walked away. Roger saw that, because they began to turn the came up the steps and into the parlor, with subject. They had lots of stories about the different visitors, and what they "I don't wonder you're scared," she seemed to expect to see; and how they



Lnawn by L. Y. Turner.

"IN ONE OF THE GREAT ROOMS, SHE TRIED THE SPRING OF THE FLOOR."

wanted to go all through the dwellinghouse. I guess we have been particwas only when they saw folks really "and I guess if they could get hold of you, they wouldn't trouble much about gathering me in!" She laughed at her with a sudden turn toward her. own words, and did not mind his con-

world outside when they came to meethouses, and couldn't understand how ing; and another said that gone look in they were just like any other private your face made her think of prophesying; but I told her that it was nothing but ularly privileged, because they said it mooning, and we got into a perfect gale. But if you did join the Shakers, Roger, cared that they let them go through. I guess they'd pet you up enough, and They all admire you, Roger," she went they wouldn't object to all the poetry you on, with a fond look at his dreamy face; were a mind to make. Why, Roger, what is the matter?"

"With me?" asked the young man,

"Yes; you haven't spoken a word since tinuing grave. "One of the sisters said we started; and I do believe this is the they wanted educated people to help first time you've even looked at me!" spread the truth among people from the There was a little note of indignation in

laughter, for though he was staring hard plexity. He tried several times to find enough at her now, he seemed not to see the next word, but the reins slipped from her. "Has anything happened? Did his hands, and he groped, as if in the dark, Elder Lindsley say something you didn't for them on the floor of the chaise, before like? You look as cross as two sticks!"

said nothing that wasn't perfectly "-

"Did he make a set at you, too? I didn't believe he would, after he warned think he spoke beautifully about marriage, -praising it up, the way he did?"

echoed. "He condemned it."

"Not at all! He said it was the best thing in the world. Didn't you hear him say they did not condemn it?"

"Yes, but he said that in the heavenly

order"-

"Oh, well, he had to say that because he was a Shaker. He had to defend himself, somehow."

Roger looked at the gay, bright face so close to his shoulder, and whatever he said, and what you said back." might have answered, he said nothing.

"But I like the Shakers," she ran on. "I turned, austerely, "if I told you that I think they are as nice as they can be; said nothing back?" and if folks want to live the way they do, I don't see as anybody has a right to say answered with a tender anxiety, and she anything. How sweet the sisters do look; tried to steal her hand into that hand of and so clean! And the brothers, all of his which lay on his knee next to her. But them, with their hair all coming down his hand was gathered into a fist, and she their necks, that way, and their white failed, and withdrewherself into her corner collars close up under their chins? But of the chaise. "What do you mean?" it seems very funny the men should let their hair grow long, and the women crop no answer to make to them; that their theirs off short. You know they have it doctrine is right, and their life is right." cropped off short under their caps?"

" No : I didn't know that."

"Yes. Sister Candace said so when I was fixing mine. But she said mine was -she said nicer things about it than you ever did, Roger. Why, how absent-minded you are! What were you thinking about then-just that very minute?"

"I? I wasn't saying anything!"

"Of course, you were not! And I in the chaise. don't believe you were thinking anything either, if the truth was known. What was it you and Elder Lindsley were the same thing?" talking about there at the gate? You said, 'If I see the truth'- I guess swered more gently. "I told them I saw the sisters thought you were going to prophesy!"

outcry which seemed partly a recogni- are right, or they are wrong."

her voice, which was half a tremor of tion of the fact, and partly a burst of perhe spoke again. "It was something we "I'm not cross," Burton began. "He had been talking about. Why did it seem so strange to you that the sisters should want us to join them?" He looked at her now steadily, but with the vagueness me so against the sisters. But didn't you that was always in his eyes. "Did you think they hadn't a right to do it?"

"Of course, they had a right to do it! "Praise up marriage!" the young man If they believe they're leading the angelic life, it's only common charity for them to

want other folks to lead it, too." He winced a little, as if at a lurking mockery in her answer, but he asked: "And should you blame Elder Lindsley

if he had tried to persuade me, as the sisters tried to persuade you?"

She hesitated a moment. "I don't know as I should." She added gaily: "But I wish I could have heard what he

"And what should you think," he re-

"I don't understand you, Roger," she

"I mean," he burst out, "that there is He seemed to wish to go on, but the impulse that had carried him so far failed

She was too Puritan in race to let him shrink from the logic of his words. "Then you would like to be a Shaker yourself," she said, gravely, and she looked steadily at him from as great a distance as she could make between them

He held his face doggedly away. "Didn't you tell the sisters pretty much

"That isn't the question," she annothing to blame in their way of life."

"A thing cannot be blameless and yet "Oh!" Roger came to himself in an be an error," he interrupted. "They That was logic, too; and she could not gainsay him. In her silence he went on: "Nothing that Elder Lindsley said convinced me; he tried to hold me back. But I saw the truth for myself, in the light of the gospel—that shined round about me, suddenly, as it shone round Paul. Those people have found peace—and all the rest of the world is at war. By their fruits ye shall know them. It must be that they are right! They live as brothers and sisters—as angels. Yes, it is the angelic life!"

She only repeated: "Then you would

like to be a Shaker yourself."

He did not answer her directly. "I can remember my own father and mother, even. They thought all the world of each other, but they were always disputing and quarreling; and look around at all the married people! Every house is a scene of contention. Will against will, always! Your grandfather and grandmother, who have lived together for fifty years, do they agree? But the Shakers have peace; the kingdom of heaven has come to them on earth."

"Then you would like to be a Shaker, too," she repeated again, but less harshly

than before.

"I can be nothing without you, Chloe! We should not care less for each other, but—differently. Let us both—I have had this day a vision of the truth, and now I see that all we have thought, all we have hoped, from our—our—love, is a mistake, a snare, a delusion! But there is another love! There are brothers and sisters there who were once husbands and wives, I feel bound as much as they were. But we could join the Shakers, and be as free as they are—as the angels are—I have hurt your feelings!"

"Ah," cried the girl, "you don't know what you've done! It isn't my feelings you've hurt!" And perhaps in these words she meant to express what was otherwise unsayable: the wound to something deeper than feeling, to her womanhood itself, to what was most sacred and most help. 'ss in it. "Do you expect me to argue with you, Roger? To tell you that I wish to be your wife, if you don't

wish to be my husband?"

"No, no! Surely not that! I only wish you to see this step as I do, and to take it with me."

She slowly shook her head, and he added:

"For I can never take it without you!"

"Yes, you can, Roger!" she returned.
"And you will, if you are convinced.
But are you really, really in earnest? No, you needn't tell me!" She was silent, and then she said, desolately, "Well, I won't stand in your way! I knew I wasn't equal to you"—

"Chloe!"

"And I always thought something would happen. Oh, I guess I'm punished enough for going to the Shakers with you!"

"It was providential—it was ordered, Chloe. Come back with me, and let us talk it over with them; and then, if you

can't see it as I do"-

"You'll give it up, and come away with me? No, thank you, Roger! I won't be a stumbling-block to you, and I would sooner die than— I don't blame you; and I want you should go back to the Shakers. Yes, I do! Right now!" She laid her hands upon the reins, and the old horse was only too willing to stop.

"Chloe, I will never go without you!"

"You will never go with me. And now, if you have a grain of pity in you, you'll get out, and let me go home alone. I can find the way, if you're not here to blind me! My head's all in a whirl-I can't take it in! I thought we had the highest claim to each other; and that there was something - something we oughtn't to give up, even for the sake of getting to heaven. I wouldn't have done it. But I don't blame you, Roger, if you don't see it so. I can't go to the Shakers with you, but you can go, and I will let you, freely; and if it is on your conscience, I will never have one hard thought of you-and I wish you to go-Oh!" She broke into a passion of grief, which was partly a passion of astonishment, as he rose to obey her, and prepared to get down from the chaise to the ground.

"Roger, Roger! are you really going to leave me?"

"You said to do it "-

"But what shall I do?" she pleaded, piteously. "What shall I say to them at grandfather's?"

"I will remain, and take you home;

and I will tell them myself. There is you think I will change? If you stay, I no haste. I will go home with you-to your grandfather's-your father's. We father's!" can go back to Birchfield, and I will tell your father-I will explain to him"-

He had sat down again, and taken the mounted. reins. She caught them fiercely from them; I will explain! And I will go know." down on my knees to them in shame. Burton, and I was the simpleton-to believe in you, to trust you. Oh, I am punished! Are you staying here because the chaise out of sight.

will get out myself, and walk to grand-

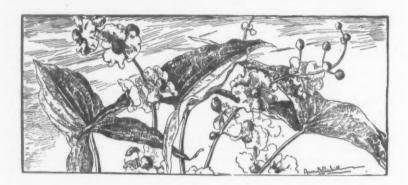
"I will not make you walk, but I will follow you"- and now he really dis-

"Don't you dare!" she cried. "Oh, I him, "Do you think I will let you ap- forgive you, Roger! You don't know pear so before them? No! I will tell how much I forgive you. You can never

She began to moan and to cry; she Yes, they were right about you, Roger pulled weakly at the reins, and the old horse started on.

Roger stood in the road and watched

(To be concluded in the February number.)



MY MESSMATE.

BY JOHN B. TABB.

Why fear thee, brother Death. That sharest, breath by breath, This brimming life of mine? Each draft that I resign Into thy chalice flows. Comrades of old are we: All that the Present knows Is but a shade of me: My Self to thee alone And to the Past is known.



Drawn by F. G. Attwood BY EDWARD W. BOK.

HE pastor of the fashionable city church and the minister of the humblest country meeting-house are alike in one respect, if dissimilar in many others: they both want the young man of to-day at church. Every pulpit utters the cry. Yet the young men do not come, and the pastor looks at his elder, while the vestryman stares at his rector, and each in turn asks: Why? He is ungodly, says the average minister; he is indifferent to religious teaching, says the more conservative pastor. He is tired on Sunday from his week's work, and sleeps away the Sabbath church hours, says, perhaps,

the charitable preacher. But, whatever the cause of the noncoming, it is the young man. He is to blame,-that

is, according to the clergy. But are the clergy right in this assumption? Is it not possible that some of the fault may lie with the pulpit, and not entirely with the young man?



OR a period of two or three years past, having in view the writing of this article, I have canvassed both among and outside the young

of acquaintance to try and see why they were more frequently absent from than present at church services. I have purposely put myself in the way of clergymen, and tried to ascertain how close three years of this investigation has they seemed to understand the thoughts and needs of young men. Whenever, be shifted entirely on the shoulders of in five different cities. I have seen anyoung men. I have failed to find the nounced a series of "sermons for young young men with whom I have talked men" from some pulpit, I have at- either ungodly or disrespectful of sacred

I have talked with stewards of the Methodist Church, with elders of the Presbyterian Church, with vestrymen of the Episcopal Church, and with churchmen and laymen in general. I have probed their general views of the religious needs of the day; I have had them apply these needs to young men; they have told me why young men men of my circle should come to church, and what they might expect when they came. I feel satisfied that I have looked at the question from the different and more important points of view, and the result of convinced me that the blame cannot tended and heard one or more of them. matters; on the contrary, I have found failed to find in a single instance. The pose to answer in this article.

them just as desirous of attending church question that naturally arises, therefore, as the church is anxious to have them, is: if young men want to go to church A spirit of indifference I did find in some what keeps them away from it? And it instances, but that is all: irreverence I is this phase of the question which I pur-

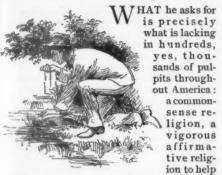


gets the notion that he wants the young all well enough to hold up this young men of his neighborhood to come to his man of the Bible as an example of rechurch, he, as a rule, adopts either one formed unrighteousness to an audience of two methods: he announces a series of Five Points vagrants, in New York of "sermons for young men," or he City, but what possible link of sympathy gives it out that he will give a series of Sunday evening talks on "the manly sports and amusements of the day." This is the average minister's method to assume that because a man does not of attracting young men; it is what may be called the clerical bait. But do the young men respond? Of course not. And why should they?

It is with the danger of erring rather on the side of the conservative, than it is to make exaggeration, when I say that during the past ten years I have listened to not less than thirty different sermons, or young men. I am fresh from such a sermon as I write. Of all those sermons, I cannot, with one exception, which I heard five years ago, recall a single instance which gave me one profitable thought presented in such a manner that I could carry it away with me. Out of these thirty and odd sermons, fourteen of their preachers took the text of the prodigal son as the theme of their sermons. To me this parable is the commentary of Jesus Christ upon the character of God, it is a condemnation of youthful folly. idea advanced was that of the riotous-living young man. That it is as much a rectly so. Nor does he ask, nor desire rebuke of narrowness within the Father's that a special "series of sermons for young to be absolutely overlooked by these him.

AM fully convinced men of the pulpit. Now I ask, in the that the present atti- name of common-sense, what possible tude of the church is application can there be in such a connot conducive towards stant treatment of the parable of the attracting young men prodigal son to the needs of the active closer to it, and it is and respectable young man of to-day? not too much to say What one point is there in common with that they will never the biblical wanderer and the average be brought into the young man of these closing years of the church by the methods nineteenth century, and what can he at present in vogue. When a clergyman learn from the character? It may be is there between this character and the young man of respectability and honorable motives? No clergyman has a right go to church, or attends church at intervals, that he is a prodigal from his Father. And yet this is precisely what these sermons seemed to infer. It may be far more in the spirit of present things to say that the young man does not go to church because he feels that he derives so little benefit from what he hears.

Nor is the mistake to attract young series of sermons, especially directed to men with a series of "talks on manly sports" a lesser one. In the first place, the young man knows more about the sports of the day than does the minister; and, in the second place, he has just enough discrimination to recognize that the subject is simply chosen to attract him, and he feels, and rightly so, that the theme is one which has no place in the pulpit. He knows the wrong and right side of sports and amusements quite as well as does the minister, and, in the large majority of cases, he is within -a revelation of God quite as much as the proper limitations. All this a young man knows; he does not go to church to And yet, in each of these sermons, the hear his sports brought into the pulpit and house as riotous living without, seemed men" of any sort shall be provided for



/ HAT he asks for drink; that he must not be adulterous. is precisely His own self-respect has taught him that. what is lacking He does not want to be told what he must in hundreds, not do; his soul thirsts and hungers to yes, thou- be told what he must do. He wants an sands of pul- affirmative religion; not a negative creed. pits through- His active life and his association with out America: men and women of the world bring him a common- face to face with social and ethical probsense re- lems which he does not understand, and ligion, a when they affect his own welfare he knows vigorous not how to meet them. This is what he expects the pulpit to build for him-not tive relig- the groundwork for a goody-goody boy, ion to help but the strong, honest, fundamental prinhim meet the requirements of his daily ciples upon which he can rear a sterling He can generally solve the prob- character. In my own personal case I lems of his play-time, but he cannot know only too well how often has Sunalways meet those which come to him day come to me with some moral problem in his work-hours. He wants to feel uppermost in my mind which a lack of when he goes to church that there is a years and experience has made me incaman in the pulpit who understands him, pable of solving. I have gone to church who knows and appreciates what are the , morning and evening hoping that some problems which a young man must face, side-light might be thrown upon my and who tells him in a clear, honest, prac- problem from the pulpit. And have I tical manner, how he must solve those received it? No, a hundred times no! problems. He does not need to be told That which I had a right to expect from that he must not swear; that he must not the teacher in the pulpit was withheld.

HE discourse of the average minister is absolutely uninteresting to the great run of young men. However much I dislike personally to say this, it is ground of statement and arover and Fra. over. It is the one

tangible in the mind. What reflection of follows trite maxim. Look into the faces stowed upon what is being said.

The modern pulpit is sluggish and stagnant. Old church-goers have again and again confessed to me that "Mr. was a little dry this evening, and the temptation to shut my eyes did come, I grant you." Now this is why young men true. Sunday after will not attend ninety-nine out of every Sunday the same hundred religious services : they lack interest. I must not be misunderstood and have thrown at me the accusation that gument is the young man of to-day is a paragon of threshed wisdom, and that he thinks he knows it all. He is not a paragon of wisdom nor anything else. The assertion that he is too self-assertive comes principally from those point turned over and over: Be good. But when he, in the very nature of things what a good life means is either left to which prefers young manhood to old age, the hearer's inference, or is explained in pushes to the wall. He does not claim such a prosaic manner as to leave nothing to be any better than was his father as a young man, but neither is he any worse. the age in which we live, of the problems At the same time, while he differs only in with which we have to grapple, is there the minor sense that each generation in the average sermon? Dry statement must necessarily differ from the preceding one, it is unjust to ask him to accept, in of the average congregation, and it is sur- 1894, the methods in vogue in 1824. With prising what little real attention is be- changing conditions come different demands, spiritual as well as material.



from church atthey are too ex-

precisely what young men cannot and do them for that matter.

T is said by some not find in Sunday pulpit discourses. that this fact Again and again have young men told keeps young men me that they can remain at home Sunday mornings or evenings, go into their tendance; that father's libraries, turn to some standard they are occupy- work, and derive more actual benefit and ing more respon- mental refreshment than if they went sible positions in with their family to church. I know one the business world young man of splendid character who rethan ever before, sides in a small city and has heard the and that when ministers of all its churches. He tells Sunday comes me that now, on Sunday mornings, he remains home, takes down the Bible, reads hausted to go to it himself, and extracts more actual help If this is true of some, as it from one chapter of Proverbs than his exundoubtedly is, it is likewise true of a perience with the ministers of his city greater percentage that this very fact has taught him he can expect from their makes them the more desirous of listen- expositions. Nor is this instance a single ing to that practical wisdom on Sunday one by any means. A well-stocked liwhich will make their tasks easier during brary is to-day the successful rival of the week. As a young man progresses many a clergyman in the homes of hunin business, he naturally feels the need of dreds of young men. It isn't that they a larger and broader knowledge, and if he prefer the library; they would gladly go knows that he can receive that knowledge to church if they could feel reasonably in church on Sunday, depend upon it that sure of listening to some sermon which he will be found in his pew. But this is would be of help to them,-or interest



was it that men, old and young, always are dealt with in this pulpit by a man

HE fact of the mat- thronged to hear Henry Ward Beecher? ter is, that go into Because they felt that there was a man any of our large who was one of them, and could and did cities, and the min- enter into their lives. It wasn't the glamisters who really in- our of a great reputation which kept terest young young men close to Mr. Beecher for years men, and draw and years. Nor is it such a glamour or them Sunday the reflection of past associations which after Sunday to gives Lyman Abbott an audience each their churches, Sunday composed two-thirds of young can be counted men, and makes him the most desired of on the fingers of speakers at college commencements. It one hand. It is is because Dr. Abbott knows young men, not that and they know it, and they come to him. interest- It is a common remark made of St. ing minis- Stephen's Episcopal Church, in Philadelters exist phia, that so many men attend the serin these vices that there is scarcely room for the cities, and women. What is it that draws young that the men by the scores to hear the rector of young men do not know of them. Wher- that church, the Rev. S. D. McConnell, ever they do exist, they are quickly discov- preach? What is it that makes the leadered, and their churches are soon thronged ing bankers of Philadelphia, its railroad with young men, showing plainly that presidents, its foremost physicians and young men will attend church when they lawyers, and the most important business know that there is a man in the pulpit who men of this city attend this church? It will say something to interest them. Why is because the practicalities of daily life

of Dr. Service, of Detroit; of Dr. Rains- derstand, and take into their lives.

who knows men, who meets them in busi- ford, of New York; and of Dr. Purves, of ness life, and rubs up against every phase Princeton,-preachers upon whose words of a city's pulsations. The same might young men fairly hang, because they feel be said with equal truth of Dr. Meredith, that the message which they speak has of Brooklyn; of Dr. Egbert, of St. Paul; in it something which they can feel, un-

> fact that the average minister of the day-I speak now of the many and not of the few-is wholly out of touch with the times in which he lives. The modern

requirements are as an unopened book With a tenacity which does to him. him no credit, he clings to the traditions of a generation ago. The real, living world, the world in which men move and have their daily being, is an enigma to him. The pulsations of the great business world, in which the men of his congregation move every day, and where they have the greatest need of the ministrations of his office, are unknown to him. He never goes into it; he never seeks it. He lives with his books, rather than with men. The great fault here seems to me, sometimes, to lie in the fact that we educate the goody-goody boys of our families to be ministers. Let a boy give indication that he is apart from the great world, is studious when other boys are at play, has inclinations for ethereal rather than material things, and that boy is at once destined for the ministry. His boyhood is spent away from the world of boyhood. He is carefully nurtured, and his every thought toward the unpracti-

cable is encouraged. He goes direct from a misspent boyhood into a seminary, and from the seminary

T is a lamentable he goes into the pulpit to teach men and women how to live in a world of which he has never been a part. Life means nothing to such a man, and he conveys precisely that meaning to those who listen to him. "We don't expect our ministers to be business men," is the apology usually made. Then, pray, how are they to understand the needs of the business men of their congregation? If they have not exactly the same need of practical business judgment in their affairs as have men of other trades and professions, they at least might secure the knowledge of it, and . know what the spirit of the business world is and means. "They deal with higher thoughts," is another excuse. But of what value are higher thoughts, if they cannot be applied to material facts?

Excuse these things as we may, explain them away as we choose, the fact remains that the crying need of the American pulpit is for men who are more in touch with the world-at-large,-in other words, who have an intelligent knowledge of those elements which enter into and form the greater part of nearly all men's lives. And until a greater number of men who understand the world, and have rubbed their shoulders against it, come into our pulpits, the attendance of young men at church will be what it is to-day, if it does not grow even less. It is not meeting the exigencies of the case to say that this is asking for a religion of the head rather than the heart. The spiritual and the material cannot be separated very far when it comes to a question of a man's needs. The young man simply asks, when he goes to church, that he will be mentally interested at the same time that he is spiritually benefited. He does not ask for "light talk;" he asks simply for common-sense, every-day truths plainly put.

is not an indication of sermons than did his forefathers. But he religious degeneracy that does want them, and he will go where he the young man wants shorter will get them. And just here is where the

can say all he need say, on any given subject, in twenty or twenty-five minutes. length in a refreshed state of mind-he to date." rarely does from a forty-minute sermon tion. In every branch of our literature, Puritan times.

Episcopal Church is adding so largely to a living knowledge of the times rather its membership of young men by its twen- than of a borrowed knowledge from histy-minute sermons. To be compelled to tory. Things of the present are upperlisten to a thirty-five or forty-minute sermost in the minds of the people of tomon is not only asking too much of peo- day, and this example and this tendency ple nowadays, but it is unnecessary. If the young man, of all others, is absorba man be of the proper mental caliber, he ing. And when he goes to church he expects, and has a right to expect, that he will find the pulpit up to the times,-or, A man rises from a good sermon of that to use one of his own pet phrases, "up

The minister of the present cannot afwhich must, of necessity, have offended ford to be behind the times in thought the laws of concentration and condensa- or method. He should rather be in advance of them. But if he cannot be that. the order is, concentration. Space and let him at least be abreast of modern time are alike valuable commodities in thought. If he seeks for illustrations in journalism. Why should they be of less his sermon, let him go to modern life value in the pulpit? The minister of instead of history, or even to the Bible. to-day must remember that he is not the A modern illustration of bravery, such only fount of intellectual or moral inspi- as occur daily all around us, will be far ration in the community, as was true a more effective and better understood than hundred years ago. He talks to-day to if the heroism of David before Goliath a far more intelligent and broad-minded be employed. The church is sticking too audience than did his predecessors of closely to traditions in these times, and Men and women are its ministers are to blame. The living thinking more for themselves than ever present is always the most interesting to before. The minister can better hope to those who make it and comprise it, and the suggest than to teach. Therefore, should clergyman of to-day should, of all men, his sermons be more compact, filled with feel this, and govern himself accordingly.

claimed, is too exclusive. Naturally, no will be there, and he will bring to the proud-spirited young man will come to church that same zest, that same vigor, hear the gospel as a mere courtesy, and that same glowing enthusiasm in a Analogous to this, is the criticism that spiritual way which he is bringing, in a forms of worship in vogue in some of material sense, to the business world,

SOME will argue part. With these criticisms I have not that the real dif-sought to deal in this article. The minficulty is not with ister is an important, if not the most imthe minister: that it portant, figure in the church. As he is fundamental, and is, so, very likely, will be his church. concerns the church. And, as he preaches, as he presents It has been asserted himself; as he is, or is not, a living that cumbersome example of "know thyself," so, in like creeds contradict proportion, will the young men come to the word which his church or absent themselves from it. often comes from For the present, it is better to treat with the pulpit. This the minister. Let him show that he is naturally touches a man of the day, that he realizes that the intelligent he belongs to the nineteenth century, that young man who he knows what is going on around him, has been taught that his young manhood is not so far bethat Christ does hind him but that he can recall it, and not teach dogma, but life. the problem of the young man and the The church again, it is often church will be solved. The young man our churches fail to give the young a and which is making him a factor there.



Drawn by J. Wagrez.

THE CHRISTMAS BETROTHAL.

BY FRANÇOIS COPPÉE.

man who has sketched so many brains, lungs, hearts, livers, spleens, and intestines for Testevuide & Co., the famous publishers of medical works, on Antoine Dubois street, had not, as you may well imagine, originally chosen this useful, but somewhat repulsive branch of art. When, in the evening courses at the School of Design, he drew, charcoal or stump in hand, from Houdon's Écorché. he had not the least presentiment of his coming fate, although face to face with that terrible figure, its muscles laid bare, and its skin stripped off as clean as that of an orange. For, to tell the truth, this Écorché was quite disagreeable to him. A timid and well-behaved youth, he thought it carried the nude altogether too far: so when, having progressed somewhat, he was allowed by his attack the Apollo Belvidere and Venus quatrain, came near losing his job.

ÉSIRÉ Muguet, designer and en- Pudica, he felt greatly relieved, and went graver of anatomical plates, the on with real pleasure copying these two divinities, which, though devoid of floating draperies and vine leaves, had had, at any rate, the decency to keep their skin on.

Like so many others, Désiré Muguet, in his youth, had had his dreams of success and glory. But nowadays, with butter so high, such dreams have often to be dismissed. I have known in a little café of Batignolles a poet who was wont to shrug his shoulders when the name of Victor Hugo was spoken in his hearing; he now earns forty sous a day by composing every morning, standing before his shaving-glass, a couple of lines advertising a certain soap. And really he is not to be pitied, for a franc a line is very fair pay. Unfortunately, the soap-dealer, because of the cost of advertising, will take only two lines per diem. Once the master to drop the man without skin, and thoughtless poet, having ventured on a

and of whom for a short time the École des per square centimeter. But, unfortulimit of age, -he had failed in the competition for the Prix de Rome. Yet the subject was a fine one: "Themistocles Imploring the Hospitality of Admetus, King of the Molossi." His composition was a good one; only just think of it! he had forgotten the dogs, the Molossian dogs. The jury concluded that he lacked imagination, and awarded the prize to Petraz, who, because he, on that day, did not forget the famous dogs, has made his way famously, got important orders, become a member of the Institute, secured a handful of decorations, and is to-day painting the portraits of our most illustrious contemporaries, so wan and on so dim a background that they seem to have been done in starch at the bottom of a cellar. Unlucky! This motto Désiré Muguet might fairly have had printed in black, glazed type upon his letter paper, had he not, poor fellow, been obliged to use for his rare correspondence cheap wrapping paper bought at the grocer's across the way.

Yet, at his birth, he had had a great piece of good luck, the very greatest, in my humble opinion. His parents were honest people. You say this is a very common matter. Not so common as you think. And you, my materialistic friend, do not smile so! You have been long enough dinning in our ears your famous laws of heredity. Why not admit that love of right may be transmitted as well as the gout, and that one may inherit virtuous as well as arthritic tendencies. I will not press my theory farther; it is not infallible. Only it is certain that Désiré derived from his parents a good solid conscience, made up of honor and kindliness, something, all wool, that would wear, and which was to keep his heart warm as long as he lived.

Désiré Muguet's father held the humble, but respectable, position of à bank porter. Is there any mysterious relation between scrupulous honesty, on the one

Désiré Muguet, who in his youth had side, and, on the other, a full-skirt coat of been looked upon as an artist of promise, gray-blue cloth and a cocked hat? Probably; for you may intrust a pocketbook Beaux Arts had expected great things, stuffed with thousand-franc notes to any would naturally have been perfectly satis- man so dressed, although he may have fied to sell his paintings at the rate of for his own private enjoyment nothing three thousand or four thousand francs more than a few coppers; you may let him run from morning to night among all nately, in his twenty-ninth year,-the the temptations of Paris without his everat any rate, the case is extremely rarebeing tempted to take the express for Brussels. A comforting proof this that, as a whole, the sons of Adam are far less rascally than some pretend. As for Father Muguet, he was the model of bank-porters. and, besides, so excellent a specimen of the husband and father, that he heroically gave up his tobacco when he saw that his wife, a skilful needlewoman, was spoiling her eyes by working at her trade till midnight in order to meet the increased expenses caused by little Désiré's birth.

This mother, though a humble working woman, had transmitted to her son an extreme sensitiveness, a delicate, let us say it, an aristocratic way of feeling and thinking. Such women are not rare in the humbler Paris world. This one was very glad when her boy manifested a remarkable gift for drawing. "He may become a great artist," she then said to Father Muguet, who was a little troubled at the child's vocation, but very proud, after all, when the little fellow brought him, on his birthday, two pages of noses and ears, and a Vitellius in two colors, drawn from the bust.

For long years the parents practised all sorts of self-denial to enable Désiré to follow his artistic studies. The father's mustache turned gray, and the mother's refined face became wrinkled, whilst Désiré remained a simple dauber, unable to earn his living. Honest and sensitive as he was, he suffered from this, and reproached himself with forcing this life of privations upon his parents. Many times he proposed to them to give up his hopes and take to humbler work; but the good couple bravely refused their consent, and deceived by Désiré's success at school, retained their confidence in his future. As for him, being by nature quite modest, he soon came to doubt it himself.

The truth is that he had not a spark of genius, of originality. The utmost that



Drawn by J. Wagrez.

CHRISTMAS EVE.

Désiré as an example to his comrades, competitions, with the "very good" of the professor.

everywhere for work, and occasionally found some poorly remunerated job; a portrait to paint, some lessons to give. He tried, also, working for the illustrated papers, but with poor success, for he lacked facility, and was unable to impro-

vise a picturesque sketch.

self, shudderingly, whether he had not peacefully initted a woolen stocking. missed his career, and what was to become of him.

from a disease of the eyes that in a few up her work. Désiré was then thirty de Rome, because he had left out the dogs of the king of the Molossi. Misfortunes were crowding about him; but to men of the right temper adversity is a strong in-

centive to effort.

He at once gave up all his artistic ambition, his dreams of glory; it must be confessed that these were not as bright as be taken care of, even if he had to do journeyman's work. Some one had in former days proposed to him to design brought her easel in front of the "Drop-Désiré Muguet, with his flowery name on a new canvas, Titian's entombment,

he could have done, by dint of much and flowery soul, who in former times effort and will, was to acquire some facil- almost fainted at the sight of blood, when ity in painting faithful, conscientious he cut his thumb in sharpening his crayportraits. But, as his drawing was irre- ons, bravely overcame his repugnance, proachably correct, his master, an old went daily to the amphitheaters, stapupil of Ingres, - whom the students tioned himself, sketch-book on his lap, nicknamed Colonel of Pompiers, - set near the dissecting tables, and copied from nature the revolting things he saw. The good fellow was not at all spoiled by It was horrible; but he earned twelve or this praise; in fact, he blushed at it. fifteen francs a day. From eight o'clock Still, it caused him some illusions; kept to eleven he was in those scientific charhim satisfied with his cheap triumphs as nel-houses, before a heart perforated by-"good pupil," with an honorable rank in an aneurism, a stomach devoured by cancer, a pair of lungs riddled by tubercles. He worked at his sketch mi-He was not wholly dependent on his nutely, conscientiously, as he used to family. Full of good will, he sought work when, in the Musée des Antiques, he drew Polyhymnia, or the Discobolus. Then, at home, after breakfast, in the little apartment on the fifth floor, La Harpe street, the poor fellow bent over his copper plate, and till evening engraved another hypertrophied heart, another cancerous stomach, or another pair of phthis-On the whole, his youth was sad ical lungs. Not cheerful work, certainly; enough. An exemplary son, he saw but work that procured coal for the stove, his beloved parents grow old in poverty bread for the cupboard, and kept the pot on his account, and from a sense of duty boiling on the kitchen stove, and near he abstained from all pleasures and dis- him, as he wrought, his mother, with her tractions; sometimes even asked him- poor eyes protected by a green shade,

Had the consciousness of duty accomplished driven out all regret for the past? A catastrophe answered. His father Not quite; for when he gave up high art died suddenly, and his mother, suffering and became a painter of surgical cases, Désiré not only renounced his little trimonths left her almost blind, had to give umphs at the École des Beaux Arts and the periodical compliments of the Colonel years old, and had just missed the Prix of Pompiers, he also-and this was far more painful-tore from his heart a nas-

cent affection.

At the Louvre he had become acquainted with Miss Clara, like himself a poor painter, who earned her bread by copying and by giving lessons. She and her father, a paralytic old man, whose only income was a meager pension, lived in Neuilly once they had been. His mother must on the ground floor of a little house with a garden attached. Désiré first noticed Miss Clara's pretty eyes one day when she had and engrave—for he had some skill with sical Woman;" but he was so very timid the burin—anatomical plates. For such that she had time to finish her copy—very work his great ability as draftsman imperfectly, it must be said-of Gerard fitted him admirably. He accepted the Dow's masterpiece before he ventured to offers of Testevuide & Co., and our poor address her. She had nearly completed,



doublemisfortune,-his father's "HE WOULD WORK FOR THREE INSTEAD OF TWO, THAT IS ALL."

presented her with the betrothal ring. Clara had just begun upon Greuze's "Broken Jug," when Désiré told her of his death, and his mother's partial

blindness,—and they had to acknowledge other, a very ridiculous one. that they were too poor and had each too many burdens to think of marrying. The pure-hearted couple had separated, each avoiding looking into the other's eyes lest he should see tears there. Since then ten years had passed, but Désiré had not forgotten the gentle copyist; he heard but seldom of her and vaguely. She had lost her father and was giving lessons in various young ladies' schools.

was barely forty, his beard began to grow white. If it had behaved like other beards he would not have minded. But, by a most singular phenomenon, it turned only on one side, the left, that of the heart, so that with his bicolored beard the poor fellow looked like a walking advertisement sent out by the inventor of some dyeing liquid or ointment. Désiré who, for economy's sake wore his hats and jackets To all these misfortunes was added an- three years, had never, while looking in a glass, found anything to admire in his who was passing by, arm in arm, with a vanity. But this physical singularity which gave him two aspects, that of a young man on the right side, and of an old man on the left, quite disturbed him. He had a vague consciousness of being a monster. Everybody looked at him in the street; he was getting nervous, and caught himself wishing that new troubles might come and at last whiten the rest of his beard.

Meanwhile, he was slowly making his way. The Testevuides were quite satisfied with his work. His last plates-a sarcoma of the kidneys, and a facial lupus vortex -had won for him the publisher's praise. He had laid by something, and could afford some luxuries to the dear old mother, whose eyes were certainly not worse. But, after all, his was a sad enough life.

So on Christmas eve, working tilleleven by lamplight, engraving a madman's brain, Désiré turned to his mother who was nodding by the stove, and, as he knew she was both very pious and somewhat fond of dainties, he said to her:

"If you feel strong enough, mother, I will take you to hear mass in St. Severin's, and on our way back, as the meatshops do not close this evening, we will buy something nice and have a little Christmas feast."

But the old lady did not feel like going

"Go alone, my boy. You can pray for both of us, and, meanwhile, I'll be reading mass here by the fire. Bring back some galantine and a bag of chestnuts."

And as he kissed her on the brow before leaving, she pressed him to her heart and added:

Poor boy, Christmas ought surely to bring you some happiness."

The weather was horrid: a black, damp, penetrating cold. Large flakes of snow fell and melted into mud on the pavement. Still, in the medieval streets winding around the old church, more than one shop was ablaze, and things wore a holiday look. Housekeepers went about briskly, basket in hand, calling at the grocer's and the meat-cook's. From the wine-shops came the noise of songs and the clatter of dishes. Désiré, with his people. But a tall girl in a plumed hat, had her share of hardships, poor girl!

looks, and was far removed from personal student, stared at him with her bold, impudent eyes, and burst out laughing, as she exclaimed:

"Look at that fellow! Snow has fallen on only one side of his beard!"

And suddenly saddened by this reminder of his physical infirmity, poor Muguet

stepped into St. Severin's.

This church, one of the Gothic jewels of old Paris, swarmed with people; innumerable tapers dotted it with golden spots; from the choir radiant with light, amid a cloud of incense, the joyful notes of the Venite Adoremus broke forth. Désiré Muguet, standing near one of the pillars in the aisle, was trying to recall a prayer. He had long since left off attending service regularly; he had become sadly indifferent; but, spite of it all, his simple-minded, patient soul retained a measure of faith and religious hope. The parting words of his mother came back to him. Yes, Christmas was almost in duty bound to bring him a pleasant surprise, something like the paper of bonbons he found in his shoes when he was a little boy. Was it to be his fate to grow old and die without having known of life anything else than its duties and burdens? He would not be exacting. He knew that the average lot is richer in mishaps than in good fortunes. Still, to be frank, his share of happiness had been very scanty and Providence was his debtor.

He had had no chance-none at all; not even a little love. Suddenly he thought of Miss Clara and their little romance, especially of the day when in the Salon des Sept Cheminées, under the stern eye of Géricault's "Wounded Cuirassier," he had slipt his first billet-doux into the young girl's paint-box. Alas! after the declaration, after the gift of the betrothal ring, they had been forced to renounce their loving projects because of family duties. And when Désiré, surprised weeping by his mother, had confessed to her his sacrifice, the good woman had cried also, but had added: "After all, my good boy, you did right. Your plans were not reasonable."

What had become of dear Clara? He had heard that she was now an orphan; that she went from school to school givkind heart, shared in the joy of these poor ing drawing lessons. She must have

He was sure she had loved him; at the going to take care of her, poor dear, and time they separated, she had, at his re-that from this very evening she shall share quest, kept his ring for friendship's sake, mybed, after having shared our supper?" -a poor, little, twelve-franc affair, that he had bought of a Jewish jeweler on Rambuteau street.

These recollections saddened still more poor Désiré. He left the church, went to the meat-cook's, had a slice of galantine cut, then bought of the Auvergnat at the corner a pound of hot chestnuts, and climbed again up his four flights of stairs.

What is going on in his rooms? The door is aiar and he hears a woman's voice, and something like a sob. At one o'clock in the morning! Good heavens! Has an accident occurred? Is his mother ill? He goes in at once, and stops, stupefied.

In the old arm-chair is sitting a woman, very pale, in a tattered black dress, and in front of her, holding the poor creature's hands, as if to warm them, Mother Muguet is sitting on a stool. Is he dreaming? Now he recognizes the unfortunate creature! Those features, so delicate, in spite of their wanness, are hers; those eyes, so hollow, yet so soft, are Clara's eyes; he has not seen them for ten years, but he never forgot them.

"Clara!" he exclaims.

And his mother, arising, puts both her hands on her son's shoulders, and says, her voice trembling with emotion:

"Yes, Clara; thy poor Clara, who has just been relating to me her life, the life of an honest and courageous young woman; Clara, who lost her father two years ago, who has vainly tried to earn her bread by giving lessons, who has endured the greatest hardships, who was for three days-it breaks my heart to say it-in a night asylum, and who, unable to secure admission to people there three days-thought of throwing herself into the Seine! Clara, who,

in her despair, had one good inspiration, remembered that this was Christmas eve, the date of the birth of the God of love, and came to ask aid of the mother of her old lover, the old woman who, without knowing it or wishing it, had separated you, poor children. Was I not right to tell her that she is at home now, that we are

Désiré was beside himself with joy. This, then, was his Christmas surprise! He kissed his mother, fell at Clara's feet, took her hand, bathed it with his tears, and started as he saw a ring shining there. He cast a quick, loving, wondering glance at his poor friend's face. She smiled-oh, such a pitiful smile!-and, in a feeble voice, said:

"Yes! rather than let it go I should

have starved."

Need I tell you that Désiré did not close his eyes during that Christmas night, thinking of poor Clara on the other side of the wall, her head resting on the same pillow as his good old How glad he was to have mother's. four hundred francs in the savings bank and three louis in his money-box! It was enough for the expenses of the wedding, which should take place as soon as Clara's cheeks had recovered some of their plumpness.

After that! Well, he would work for three instead of two, that is all. For some time he had hardly been able to keep up with Testevuide's orders. them come on now with their brains, lungs, hearts, spleens, livers, intestines, all attacked by the most abominable diseases,-he was ready. He would draw and engrave as many of them as they wished; he would not wince at the dissecting tables in the Practical School.

Happy Désiré! Decidedly, this Christmas was bound to make amends for the past and render him perfectly happy, for next morning, as he looked in his glass before washing his face, he saw that the it this evening—you know they only keep right side of his beard had grown white during the night so full of emotions. So

when Clara appeared, arm in arm with the old lady, Clara fully rested, not so very much changed, not grown so very old,-in truth, almost the Clara of old, spite of all her sorrows, he could show her a face that no longer looked like a dye-merchant's sign, a kind and cordial face, with a white beard, it is true, but in which shone eyes full of youth and of love.

A SONG BEFORE SAILING.

BY BLISS CARMAN.

WIND of the dead men's feet, Blow down the empty street Of this old city by the sea With news for me!

Blow me beyond the grime
And pestilence of time!
I am too sick at heart to war
With failure any more.

Thy chill is in my bones;
The moonlight on the stones
Is pale, and palpable, and cold;
I am as one grown old.

I call from room to room Through the deserted gloom; The echoes are all words I know, Lost in some long ago.

I prowl from door to door, And find no comrade more. The wolfish fear that children feel, Is snuffing at my heel.

I hear the hollow sound Of a great ship coming round, The thunder of tackle and the tread Of sailors overhead.

That stormy-blown hulloo!
Has orders for me, too.
I see thee, hand at mouth, and hark,
My captain of the dark.

O wind of the great East, By whom we are released From this strange, dusty port to sail Beyond our fellows' hail,

Under the stars that keep The entry of the deep, The somber voice brings up the sea's Forgotten melodies;

And I have no more need Of bread, or wine, or creed, Bound for the colonies of time Beyond the farthest prime.

Wind of the dead men's feet, Blow through the empty street! The last adventurer am I, Then, world, good-by!



HUMBOLDT'S AZTEC PAINTINGS.

BY PH. J. J. VALENTINI.

the century was in its cradle.

the favorite subjects of his observation existing between those countries he had

LIFTY years ago, Alexander von Hum- and research. Four years were spent by boldt was looked upon, not only in him in the examination of the water-Europe, but all over the learned world, as shed of the Orinoco river, in ascending being the embodiment of science itself, as and in crossing the gigantic Andes of the interpreter of new laws of living na- Peru. But material more fascinating and ture discovered by his unerring genius. varied awaited his many-sided intellect We are approaching the end of this in Mexico, or, as it was then called, the century, and he was already famous when kingdom of New Spain. Wherever he set his foot in this subtropical region, he Physical phenomena, as displayed with- said that he was struck by the great conin the compass of the tropical zone, were trasts, in sky, scenery, and civilization,

his enthusiasm he conceived, and later on was not so much what he taught of the immense resources hidden in this distant colonial kingdom, as his method of treating a subject of so vast a compass and extent, which foreshadowed the coming author of the "Kosmos."

This famous essay of Humboldt, an inexhaustible treasure-house, has been rummaged for nearly eighty years by all those who desired full and correct information. It has appeared in print in every language of the cultured world. Scientific Germany has gloried in having published every line of any account that was written by her pioneer and leader; nay, even as with Shakespeare, the very number of the words he employed, and their recurrence, have been calculated. Considering, therefore, all this minute study of the work of the beloved and admired Humboldt, it seems almost incredible that one precious relic and gift of his should have escaped the attention of his commentators.

mention, in his essay, of a rare collection of Aztec paintings, brought home from

Library in the year 1806, a collection which, he declared, served both to illustrate the technical achievements of the prehistoric race in Mexico, and the manner in which this people recorded events of domestic. tribal or historic importance. Whether this deposit was neglected by Humboldt or by the librarian, and who at last called attention to it, we cannot tell. It is enough to say that the portfolio, with its treasures, lay forgotten on the shelves for a period of eighty-two years,

left and this one. Under the impulse of until 1888, when we learn that it was opened for the inspection of the memalso achieved, that masterwork bearing bers of the Congress of Americanists, the modest title, "Essay Politique sur le then assembled in Berlin. It contained Royaume de la Nouvelle Espagne." It sixteen sheets of paper, of different sizes, each of them covered with those quaint pictorial characters employed by the Indians in their ignorance of our alphabetic writing. What these characters meant, no one, of course, was able to say. The task of interpretation, therefore, devolved upon the eminent Mexicologist, Dr. Edouard Seler, the results of whose researches, together with the photographic facsimiles of the whole collection, have been published by the Royal Library of Berlin, as a memorial of the Columbus Centennial celebration. Only three copies of this memorial edition fell to the share of the United States.

There are various reasons why this find is interesting, and still more, highly instructive. Aztec paintings are exceedingly rare. With the exception of a few bound codices, whose pages give the pictorial representation of a ritual calendar, the number of loose sheets known to be in existence can scarcely exceed twenty Not only once, but twice, he had made or twenty-five. A specimen of these may be seen in the rooms of the New York Geographical society. To the student of Mexico and deposited in the Royal Berlin prehistoric Mexico it is self-evident that

they are as valuable as is an inscribed brick dug out of the mounds of Mesopotamia to the Assyriologist.

Let us, first, view this Humboldt collection in the light of ancient Mexican industry. For, when first exhibited and examined, its chief interest was due to the fact that all these paintings were found to be drawn on magueypaper, a fabric very different from any other, both in substance and preparation.

"Twenty-four thousand reams of



DR. EDOUARD SELER.



paper were to be brought, yearly, as a tribute, to the storehouses of the ruler of Mexico-Tenochtitlan." This fact stands pictorially registered and clearly expressed in one of the tribute lists. which the Spanish crown, in its own financial interest, took care to secure after having taken possession of the country. Two cities are named as the places of its manufacture - Yzama-

tillea and Amacoztilla. The former seems to have furnished a paper that was thin, white, glossy, and transparent; while the other was of a coarser sort and of yellowish hue. Had this enormous amount of paper been consumed in the court of Mexico for the purposes of writing and painting alone, this fact would leave upon us the impression of a very much higher degree of culture and civilization than we can reasonably admit. In brief, only a minimum was distributed among the official scribes and painters to enable them to record the annals of the year, to provide the priests with copies of the ritual calendar, to register tributes, and to draft maps for judges and parties in cases of litigation on rural estates. The greater portion of the material appears to have been used up in finery of dress and decoration, at the daily, weekly, monthly, and

yearly religious festivities. The department of worship, therefore, was the largest consumer. To give the reader only a faint idea of the forms into which paper was pressed on such occasions, we cull from paintings and from chroniclers the following items: flags, banners, ribbons, dresses with wings for performing children, tassels, rosettes, aprons, crowns, hats, cloaks, stolas, wigs, masks, incense-bags, and strips of paper dotted with "ulli" (rubber), to be burnt on the graves of Priests, warriors, idols, the the deceased. outer and inner walls of the twenty-eight shrines of worship which studded the circuit of the large pyramid, all had to be provided with their own forms of decoration in this pliant material, Thus, we know, in part at least, what became of those twenty thousand

reams of paper—a quantity equivalent to four hundred and eighty thousand sheets, if the reckoning is correct.

What the date-tree is to the Arab, and the cocoa-tree to the Polynesian, the agave or maguey-plant was, and partly is still, to the natives of the Mexican high plateaux. It furnished them fire-wood and fence-wood, with gut-



ALEXANDER VON HUMBOLDT AT THE AGES OF 26, 44, AND 80.



THE RECORD OF THE TRIBUTE OF QUAUHTZIN.

bleeding; from the sap of its core, pulque-wine, honey, sugar, and vinegar, and from the leaf the substance from an idea as to the substance on which the ready to be painted upon.

This description shows that the writers, the surprising fact that by far the most to be solved. important component had been forgotten or ignored. Indeed, when held against are partly in black, partly in color; and largely intermixed with remnants of or- things, they do not in the least differ from to have been worked with something like black outlines are drawn with a quick and a comb. But the actual surfaces of the firm hand, the heads of animated beings

sheet, on both sides, turned out to be a thin membrane, probably taken from the deer, carefully polished and covered with some resinous substance. This explains the wonderful neatness of the drawings, and why paper dressed in this way and then folded offered such a degree of resistance as to withstand the ravages of four centuries or more.

Paper was not rolled up, as

ters, tiles, and thatching material, as also was the custom in Egypt and Rome, but the fibers from which shoes and cloth cut into strips and folded as screens are. were made. From its thorns they man- Books were finished with two nicely preufactured needles, nails, and lancets for pared boards, as is still done in Siam and Burmah.

which their paper was prepared. No pre-natives of Mexico, in common with those cise description of the various stages of Yucatan and Guatemala, generally exthis process can be found in the pages of ecuted their drawings and paintings. For the Spanish chroniclers. Some writers there are also extant specimens of the latof the past century suggested that those ter, done on raw-dressed deer-skin, and leaves were crushed and soaked in water, one of these specimens even shows the and the fibers washed and smoothed, ex- substance to be a sort of parchment, as, tended, arranged, dried, and polished, for instance, the so-called Dresden Codex, until a sheet was formed and its surface the leaves of which, so far as examined, vielded a certain amount of gypsum. This most remarkable fact is corroborated indeed, possessed a vague acquaintance by the description of one such book sent with the manufacture of paper as carried by Hernan Cortez to Spain, and this obon by the Egyptians and Hollanders, and servation was one of the many which the description is not altogether wrong, gave rise to the remark that those people although in the main incomplete. For a must have had some connection with the closer examination of a piece of maguey- ancient oriental world. To what degree paper, made only a few years ago, revealed this conjecture is right, is still a problem

The pictures of the Humboldt collection the light, the substance appeared cloudy, as to the peculiar manner of representing ganic matter, the whole pulp appearing any others that have come to light. The

> always with the profile turned to the left, and the colors employed do not exceed three. viz.: yellow, blue, and red.

As proved by their learned interpreter, the pictures belong to different epochs. Some of them must be assigned to a time in which the native artist represented his subject strictly as national tradition had taught him. In others-and these form the majority-the



RECORD OF THE DEATH OF



HUMBOLDT, FROM THE PORTRAIT BY KRÜGER.

regards technique and conception, makes itself felt to a considerable degree. One

deavor to impress upon the memory of his Indian parishioners the strange phrasing and imagery of the Christian articles of faith, was compelled to make concessions to the time-honored national art, of which a few examples will presently be given.

As might almost be expected, most of our paintings represent lists of tithes and tributes, - tribute paid to the court and temples in the time of heathenism; tribute to be paid the crown after the conquest; tribute to the encomenderos and to the priests of the new creed. the objects being of every kind, articles of luxury and comfort and the necessaries

of life. One of these sheets, seventeen times folded, and fifteen feet three inches long, gives an account of tribute paid by certain towns, four times a year, to the temple standing on the pyramid of ancient Mexico, and this during a period of nineteen years. The record of the tribute of Ouauhtzin occupies one of the seventy-five sections into which the sheet is subdivided, and the picture would read as follows: "Quauhtzin (the Eagle), lord of the town of Amayoloyan (City of the Whirlpools), pays one basket of gold dust, two small plates of gold, and one bale of embroidered cloth, three large plates of gold, ten tiles of gold, and two small baskets of gold dust to God Tlaloc (Rain-god), on the seventh day of Miquiztli (Death)."

The death of one of the tributary lords, Matzatzin ("mazatl," deer; "tzin," lord,) is recorded in another section of the same sheet, showing his body wrapped in a

influence of the transatlantic invader, as white shroud, bundled up like a mummy and sitting erect on his "icpalli," throne.

Another painting shows provisions furstriking specimen, which can be traced nished to the parochial mansion; they to between 1550-60, is in this respect of consist of table-cloths, floor-mats, maizegreat interest. It shows how the Span- straw for the mules and horses, maizeish missionary, despairing in his en- corn for the kitchen, in bushel meas-

> ures, black beans, cocks and turkeys. On another painting two days' work of maizegrinding by women are put on record by the majordomos Huitznahuatl and Quauhtli.

As will have been noticed on these samples of tributepainting, not only animate and inanimate objects, but also their amount and number were recorded pictorially. Units up to the number twenty are always represented by a dot or a small circle. The number twenty itself is designated by a flag. A third symbol, that for the number four hundred, is an upright feather; and a fourth symbol, that for eight thousand was a pouch. The sys-



THE MAGUEY-PLANT.



SYMBOLS REPRESENTING THE NUMBERS 7, 20, 400, AND 800.

tem, therefore, was based upon symbolizing the multiples of twenty; for the natives started with the idea that, in the ten fingers of the two hands and the ten toes of the feet, nature herself had indicated a system of enumeration. By the combination of the four symbols they managed to express any number they needed. Such is reached by a broad staircase, a last

a cumbersome pictorial notation gave the poor laborer little opportunity to argue with his overseer about mistakes made in his weekly accounts, and offered no basis for the development of an arithmetical

science.

A glance at another sheet THE CITIES AND AMACOZTILLA. shows to what degree of poverty the heirs to Montezuma's throne, and his highest dignitaries, had been re- mus Romanus, fortunately hunted up by duced by their new masters. A tract of Dr. Seler, it would have been impossible land, bordered east and south by a road, to give an accurate translation of the and west by a river, is seen parceled out peculiar designs exhibited on Sheet xvi. into seventeen oblong little plots, which plots were to be the future habitat of as had added to this catechismal text certain many members of the former royal court. illustrations, espe-Each of these parcels is headed by the cially suited to aphieroglyphic name of its occupant, among peal to the Mexican them names famous in the history of the mind, and had not conquest—for instance, that of the gener- these illustrations alissimo of the Mexican army, Cihuaco- been of the same huatl, the lord of Acazpotzalco, and that number as the fourof the son of the ill-starred king, Quauhtemotzin.

Court in Tezcoco."

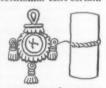
brought by the last prince of Tezcoco, Tlauitoltzin, against a Spaniard, for trespass, as we infer from the books of law lying unfolded before them, and from the attitude of the whole assemblage. The defendant is represented with his head turned away, disgusted by the overwhelming evidence hurled against him by two lawyers, his own countrymen, who assist the claimant, undoubtedly in a just cause. The three other persons, with the books of law before them, are the president of the audiencia and the two oïdores. Within the town limits another enclosure is seen, showing five main buildings, one of which

> remnant, as it appears, of the former opulence of the City of Jewels, Tezcoco ("tetl," mountain; "cozcatl," jewel). It will be observed that in 1545, which is apparently the year of the suit in question, its flat roofs of cement have

THE COATS OF ARMS OF been replaced by simple straw and thatch. Without the aid of an ancient Catechis-

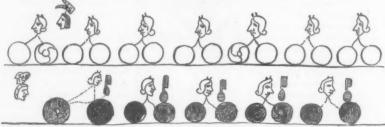
Were it not known that the missionaries

teen "articles of



SYMBOL FOR 8000 REAMS

faith," by which Sheet VI, is interpreted as "Holding the mutual relation was suggested, the A suit has been silent partnership would have escaped de-



RECORD OF MAIZE-GRINDING AT HUITZNAHUATL AND QUAUHTLI,

tection. Absurd as these pictures may appear to us to-day, they nevertheless served their purpose at that epoch. There is nothing to be said against the fitness of the allegory which answers the text and question of the first article, "How many articles of faith?" where the cross represents faith, the book the articles, and the number of rounds their number - fourteen. But how can we realize that a picture should suggest the third article, "Christ's descent into hell, whence He has to guide forth the souls of the holy fathers, who are waiting ILLUSTRATIONS OF THE for Him." and the fifth article.

"Christ's resurrection from the dead, on man with a sword, and another man wardholy fathers," sally forth. In the second, hand toward a chest and toward a woman. the ascending Christ finds his way to outstretched from the starlit sky presents









CATECHISM.

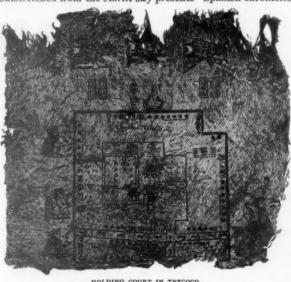
him with a "cozcatl," or jewel, the Mexican symbol for light and a pure life.

The lower half of the same sheet contains the illustrations of the ten commandments. For the first commandment stands the number - one - and God (again the picture of the turbaned Christ), holding high in his hand a heart. For the second, God appears again, and close by a hand pointing at two black strokes. The third—the face of a priest in a church, looking at an arrow (?). The fourth - mother and daughter, with the father offering a maize-ear, the symbol for "honor." The fifth-a

the third day?" In the first, Christ is ing off the blow. The sixth, which is represented as a bearded, naked man, half-destroyed, shows only a man's form. with a turban on his head, and bearing The seventh - a man tampering with a in his hands a cross. Two footprints in- chest containing jewels. The eighth-a dicate his passage into the wide-opened man handing a black letter. The ninthmouth of a monster, from which a heart a man stretching out his hand toward a and two heads, "the good souls of the woman. The tenth-a man reaching his

These pictorial wall-charts of the misheaven by the aid of a ladder. A hand sionaries are often spoken of in the Spanish chronicles as having been one of

the most efficient means by which the good-will of the Indians was conquered and their imagination, if not their heart, won over to Christianity. For instance, the conquest of Guatemala may almost be said to be due to such wall-pictures. For more than eleven years had all the caciques of the interior bravely and successfully resisted the hosts of the invaders. who had lived upon the resources of a small tract of land, with a short line of retreat to the Pacific shore. It was only in 1537, on the removal



HOLDING COURT IN TEXCOCO.



HUMBOLDT, FROM THE PORTRAIT BY HILDEBRANDT.

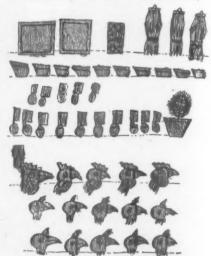
of the conqueror, Pedro de Alvarado, that and the recognition of the Spanish monthe then bishop of Chiapas, Las Casas, arch as their lord paramount. zo Maldonaldo, with the project to lay the of Guatemala, this ancient land of war, whole country at the feet of the crown of Spain, within two years, if only he might have a free hand, and act independently.

A formal compact on this subject was entered into by the governor and the good bishop, one of the main conditions being that, with the exception of his brother monks, no Spaniard should be allowed to enter the "territory of war," as the interior of Guatemala then was called. The bishop's device consisted in translating into verse in the Quiché language the great doctrines of the Church,-the creation of the world, the fall of man, his banishment from Paradise, the life of Christ, his passion, death, resurrection, and ascension,and then preparing for each of these topics the corresponding picture, as realistic as possible and in burning colors. native traders, acquainted with the topography of the land of war, were engaged and taught to repeat these couplets and to accompany them to the sound of their drums and flutes. In the first year, only

one monk was sent. He brought with him the trained traders and the written agreement signed by the governor, which they had to explain. At the sight of the barefooted padres, who did not eat meat, nor desire gold, or feathers, or cocoa, who had no wives, and were singing day and night the praises of God, kneeling before the images, the fierce cacique of the borderland was the first to yield.

The "Crucifixion" and the "Ascension" were the pic-tures which most impressed He became an eager proselyte, and in two years all the other caciques followed his example. The last of them, Coban, returned in company with Las Casas to the capital, to have the document signed, before the governor, in which freedom from the presence of any Spaniards, except the white padres, was guaranteed. in exchange for a small tribute

dared to approach the new governor, Alon- who have been travelers in the highlands



ACCOUNT OF PROVISIONS FURNISHED TO THE PAROCHIAL MANSION.



RECORD OF THE LAND APPROPRIATED TO THE HEIRS OF MONTEZUMA.

must have observed, to their own wonderment, that this compact has been strictly kept to the present day. The Indians will not allow a white man to reside in their pueblo longer than one night. They have become submissive Catholics, but they insist upon their right to have no other priest with them than one born in Spain and directly sent from the old country to the " Altos."

This sheet of the Humboldt collection has evoked special interest, for the reason that it is the first of its kind that has ever come to light from that remote epoch of missionary work a mong the Spanish-American Indians.

Picture-writing, as it was used in Mexico, Yucatan, and Guatemala, is nothing more than the copying and drawing

from nature of objects which, for certain in any degree, reasons, represented matters of which it pictures speak."

was desirable to have on record. All these records, whether drawn on paper or hewn in stone, have been found to relate to administrative questions. The device of writing in phonetic characters was entirely unknown to those peoples. Their poems and dramas, their moral and ethical teachings, were transmitted orally. The same is also to be said of history, although each tribe seems to have kept some sort of pictorial memoranda. These were collected and brought into form, and their careful interpretation was entrusted to a commission of Franciscan padres. who, with the aid of their newly-trained Indian disciples, succeeded in presenting an accurate version of those pictorial annals in the Spanish language. This work is called the Mendoza Codex, and is the primer to the student.

The interest which, mainly in the first decades of the conquest and conversion, the learned padres took in fathoming the secrets of the Indian worship, and the care they also took in leaving most painstaking account of all its minutæ, were far greater than was generally imagined. Only a very small portion of their manuscripts had been printed before, and these under a most rigid censorship. Many relics of this clandestine and patient convent-work, however, have now come to light through a systematic search, begun thirty years ago, in Spain, Italy, and Austria. "It is only with the aid of these new finds," says the interpreter of our Fiumboldt collection, "that I was, in any degree, enabled to make these



MARINA, THE INDIAN INTERPRETER OF CORTEZ.



Life came, and sought, and found her,
And put his arms around her,
Giving her promises both full and rare;
He dropped a kiss of gold upon her hair,
That crowned her pure brow as a halo faint
Might crown a saint.

And then Youth came and found her,
And wound his arms around her,
He cautioned her to be both brave and wise,
And dropped two violets upon her eyes;
Sighing to think that at some future day
He must away.

Love came, and sought, and found her,
And flung his arms around her.
He brought full many flowers from the South,
And pressed a rose-red kiss upon her mouth;
Then left her, saying, to assuage her pain,
"I come again."

Next Sorrow came, and found her,
And slipped his arms around her.
With tender touch he kissed her forehead fair,
Leaving a whiteness sad and holy there;
And loved her, nor would leave her side, although
She bade him go.

Death came, and sought, and found her,
And wrapped his arms around her.
"'Tis Love!" she cried, "Who else so fair of face!"
"Nay," answered Death, "Love sent me in his place,
To give thy lips, bidding their grieving cease,
His kiss of peace."





Drawn by Frederic Remington.

THE STORY OF A THOUSAND.

BY ALBION W. TOURGÉE.

V.

THE OUTLOOK.

T was a time of intense excitement,the conscious hush before a storm of The Federal army was threefold fury. in widely-separated localities; with Pope in Virginia, where the disastrous campaign of the peninsula had just ended; with Grant in Mississippi, and with Buell in Middle Tennessee; while eight thousand men under Gen. George W. Morgan occupied an impregnable position in Cumberland Gap. All at once, the country awoke to the fact that this force was in danger; the Confederate general, E. Kirby Smith, had collected an army in East Tennessee. What was he going to do with it? The military experts generally agreed that his purpose was to besiege General Morgan in the gap, try to cut off his supplies, and starve him into surrender. General Buell thought the move- immediately on Lexington. He also sugment against General Morgan was merely gested that General Bragg, instead of a feint, and that the force collected at operating directly against General Buell,

Knoxville was intended to coöperate with Bragg in an advance into Middle Tennessee. Both were half right. It was Bragg's first intention to drive back Buell's left. cut his line of communication, the Louisville and Nashville railroad, and compel him either to fight at a disadvantage or retreat across the Tennessee. meantime, Van Dorn was to attack Grant, Kirby Smith to invest Cumberland Gap, and, after its reduction, invade Kentucky, in order to prevent troops being sent to the support of Buell.

On the 9th of August, however, Gen. Kirby Smith had suggested to Bragg a change of plan, by which, instead of trying to reduce the work at Cumberland Gap, he should only invest it on the south with a sufficient force to prevent the enemy's advance, while, with his main army, he should march through Big Creek and Roger's Gaps, concentrating at Barboursville, Kentucky, and advance

northward, advancing by forced marches in Kentucky, and move on Cincinnati or Louisville before any sufficient force could be provided for their defense.

This magnificent plan of campaign excelled, both in boldness of design and evident and unquestionable feasibility, all other aggressive campaigns of the war. fully engaged, and, at the same time, demonstrate upon the flank of one of the enemy's chief armies in such a manner as either to compel a battle on the most disadvantageous terms, or, the abandonment of all the territory that lay between the Tennessee and Ohio rivers. Whoever might have been at the head of the Army of the Ohio, the success of this plan, if properly supported and vigorously carried out, would have been extremely probable; with Buell in command, it was morally certain. Had it succeeded, the result would have been to transfer the line of active operations from the banks of the Tennessee to the Ohio: it would have added the state of Kentucky to the territory of the Confederacy, and might, very reasonably, have turned the scale of final victory in its favor. Had it been properly supported and conducted with the same boldness and enthusiasm with which it was conceived and initiated, its author would have become to the Confederate cause what Grant was to the war for the Union, the one great captain whose achievements dwarfed all others and bore down criticism with the unanswerable argument of results accomplished.

The plan had two defects: (1) its author was inferior in rank to the general with whom he was to be associated, and to whom he was to be subordinate in its ultimate execution; (2) the force under the command of the officer having the important part to play, was entirely dismoved a week earlier, as he promised raw materials.

should content himself with cutting that General Smith he would; had he, even general's line of supply, and then turn starting when he did, contented himself with destroying Buell's communications. so as to unite their armies at some point masked Munfordville instead of waiting to reduce it, and pushed on to a rendezyous at Louisville, on a certain day, there is no reason to doubt that he would have found that city in the hands of his co-

adjutor on his arrival.

The Federal military authorities were at first inclined to adopt the views of Gen-It proposed to throw an invading army eral Buell as to the strength and object upon the wholly undefended center of a of the army under Kirby Smith, concenlong line, both of the wings of which were trating at Knoxville, in East Tennessee. After a time, the impression gained ground that it was intended to operate against General Morgan at Cumberland Gap, by cutting off his supplies. Then the popular sentiment was aroused to apprehension of an actual invasion of Kentucky, with a possible movement against Cincinnati and Louisville, both of which important points were almost wholly defenseless. General Buell was ordered to take measures for the relief of the force at Cumberland Gap. He replied, as usual, with an argument against the step required. Nevertheless, he sent General Nelson, with three brigadiers of his division, to do whatever might need to be

> With the knowledge that Smith had actually marched, apprehension gave way to an excitement closely verging on panic. On the 16th of August, the Secretary of War telegraphed the governors of Ohio, Indiana, Illinois, and Michigan, begging them to send troops at once to Cincinnati and Louisville; on the next day, Governor Tod promised four regiments in five days. The Thousand was the first instalment on this pledge. On the nineteenth, the Department of Ohio was formed, and Gen. Horatio G. Wright assigned to command, with orders, first, to relieve General Morgan, and then to see that General Buell's communications were made secure.

The discharge of this duty implied, first initiative and most active, if not most of all, the creation of an army of sufficient strength to resist whatever force Kirby proportionate to the magnitude of the Smith might have, and, secondly, its diswork entrusted to him. Had Kirby position in such manner as to baffle any Smith been given ten thousand more movement he might make. Of such an men, or even one more division and Mor- army, the governors of the States named gan's cavalry, and had General Bragg furnished, with marvelous readiness, the

army even with an abundance of the best It requires something more than men and arms; it needs a leader and an esprit which shall pervade its every There are two methods by particle. which, given men and arms, an army may be created: one is by the tedious process of daily drill, continued until the soldier becomes a machine and obedience a habit: the other is by the leadership of one in whom every soldier has an unfaltering confidence. The one requires time -the other, a MAN. Napoleon made his raw levies veterans in a day. One who has best described his method, represents an old soldier as saving to a newly-arrived conscript:

"What is it to be a soldier? To march, to load, to aim, to fire! To die, if need be, without a word. One learns it in a day. The Petit Corporal does the rest!" This is the secret: courage, a little skill,

a world of faith.

The ability to transform a mob of brave men into an army which can win victories is the rarest of all qualities, and especially rare in professional soldiers. The study of military science seems to blunt the power on which, above all other qualities, success depends. Grant had it, because he assumed that his men were as willing to do their duty as he was him-"Stonewall" Jackson had it, because his men saw in him an invincible determination and a confidence in himself. which no failure could daunt and no obstacle baffle. He achieved apparent impossibilities because he lacked the power Others developed it in greater or less degree as the war went on. General Wright was not of this type. As a cool, level-headed, faithful organizer,-a man who kept all the threads of a great work, suddenly thrust upon him, steadily in hand, never once losing sight of any part by absorption in any other part, his administration of the short-lived Department of the Ohio will always remain a testimony of the highest soldierly steadfastness and remarkable executive ability.

Few men have ever done so much under such hopeless conditions as he accomto inspire men to supreme exertion; or, command the forces in this State. Before if he had, did not feel at liberty to take he arrived, however, the Department of

But it is not an easy thing to create an his hand off the throttle of the great engine under his control long enough to lead an army against the enemy which threatened the line committed to his care. To his credit be it said, however, he knew the man who could do this very thing, and begged, again and again, that Sheridan might be sent to command the army opposite Cincinnati. "Sheridan," he wrote to Halleck, "would be worth his weight in gold." Given Sheridan to command the raw levies. General Wright promised that he would speedily drive Kirby Smith out of Kentucky. Had his prayer been granted, how different would have been the history of the next two months!

> Instead of Sheridan, General Wright had as commander of his Army of Kentucky, Gen. William Nelson, a man, in spite of many excellencies, peculiarly unfitted for the task assigned him. Impetuous and daring to a fault, he lacked the power of conciliating and inspiring others. Long service in the navy had poorly prepared him for the command of volunteer troops, unless, by experience, they had come to appreciate his good qualities and overlook his harshness and severity. He lacked breadth and scope, and was without that subtlety which previses an enemy's purpose, or the self-control which foils an opponent by skilful disposition whenever doubt exists with regard to his strength or purpose. He treated his superiors with arrogance and his inferiors with brutality. If invective could have destroyed, he would have annihilated both his enemies and his friends. Such a man, no matter what his military capacity, was certainly not likely to succeed in the command of raw troops, whose intelligence he insulted with profane diatribes, whose ardor he cooled by harsh rebuke, and whose effectiveness he wellnigh destroyed by lack of confidence.

Besides this, he was an especial favorite with, and admirer of, General Buell, by whom he had been relieved from the command of his division, then lying at McMinnville, Tennessee, early in August, when the rumor of an invasion of Kentucky first arose, and with three of his plished in his first month in this com- brigade commanders, Generals Manson, mand. He had not, however, the power Cruft, and James S. Jackson, assigned to

son and his forces under General Wright's command. Whether Nelson regarded this as an affront to himself or to General Buell, it is certain that he did not act in harmony with his new superior, his conduct and language sometimes verging upon insubordination. Thoroughly imbued with the views and policy of his old combias in favor of his old commander, that never looked upon a fairer scene. General Nelson's disposition of the forces direct violation of the orders of his department commander, and resulted in useless and inexcusable disaster.

TO THE FRONT.

and the voucher for it signed, when the Thousand were ordered to the front.

It was a hot, dusty ride to Lexington, eighty miles to the southward; but they roofs and doors of crowded freight-cars the unaccustomed scene. What was the ineradicable stamp which slavery left bore the impress of another life. It was ing no attempt to detain them. a surprise, almost, to hear the same lanslave's limbs, the slave had put his Were they not on the very theater of seal upon the master's tongue. It was action? "Dixie land;" we felt its charm, though we did not define the cause. The grass was parched and sere upon the softly ful, the famous Blue Grass region that farther on is the town of Richmond, just

the Ohio had been created and General unfolded itself before our appreciative Wright assigned to it. This department gaze-but the Blue Grass region lying embraced Kentucky, Ohio, Indiana, Illi- parched and glistening in the heat and nois, and Michigan, and put General Nel- dust of an almost unprecedented drouth.

Yet even then, when at night we made our first bivouac on a sloping hillside, with a fringe of noble trees upon the crest, a tiny stream trickling from a placid pool that lay below a great springhouse, through the mossy stones of which its waters fell; a spacious mansion in a stately grove upon the opposite hill, with mander, he seemed unable to rid himself its white "slave quarters" glistening in of the idea that General Buell was still in the moonlight, there was not one among control of his movements. It was no them who did not feel, not only that he doubt largely due to this unfortunate was in a foreign land, but that he had

From the mansion there was no greetin his new command was, apparently, in ing. An overseer, with a chronic snarl upon his face, came to inquire and object to our intrusion. A colored woman sold milk and butter at the spring-house until there was no more to sell. After the guards were set, black figures stole softly down from the "quarters," crept up Hardly was the last belt-plate issued to the sentinels, who, scrupulous in the discharge of their duties, kept the sergeant of the guard busy bringing them to the officer on duty. They came into his presence with soft, apologetic steps, were eager eyes which scanned from the making excuse as the instinctive knowledge of character which slavery gave, taught them to do, asked a few questions; answered cautiously such questions as upon the land and people which it were asked, showing clearly that pretouched? Hardly a score of the Thou- science of a result, which the wise stand sand had ever been on slave territory most hopeful dared hardly anticipate, before, and each felt at once its strange which marked the slave's view of the situnaccustomedness. The houses, the fields, uation everywhere. After a little, they the people gathered at the stations, all slipped away, one by one, the officer mak-

The harvest-moon shone brightly on guage spoken; and one noted, instinct- the rows of sleeping men, each one of ively, that if the master had bound the whom had his new rifle close beside him.

This was the military situation when, rounded hills; the pools were dry; the on the 25th of August, Adjutant Robbins low branching oaks showed brown and reported the Thousand to General Nelson, dusty under the summer sunshine; the in command of the District of Kentucky, wild wormwood grew rank and green at his headquarters in Lexington, eighty above the stubble; the shorthorns roamed miles due south of Cincinnati, on the road restlessly about, vexed with thirst and to Cumberland Gap. Fifteen miles bestung with flies. It was rich and beauti- yond runs the Kentucky river; ten miles

seven thousand men. There were troops at Lancaster; a brigade at Nicholasville; some regiments at Versailles; a camp at Frankfort, and two brigades at Lexington. These, with Dumont's division at Lebanon and other points on the Louisville and Nashville railroad, constituted the Army of Kentucky under General Nelson's command. General Boyle, at Louisville, and the garrisons of Bowling Green and Munfordville received orders directly from General Wright, the department commander. The troops in and about Lexington, General Nelson estimated a few days later, at sixteen thousand men. Seventy miles beyond Richmond, at Barboursville, lay the Confederate general, Kirby Smith, with the force he had brought through Roger's and Big Creek Gaps. He was twenty-five miles to the rear of Cumberland Gap, where the Federal general, Geo. W. Morgan, was shut up with seven thousand men.

There were two unknown quantities in this situation: first, how many troops had the Confederate general? second, what did he intend to do with them? As to the first, General Smith's force had been re-

beyond which were camped two brigades ported all the way from fifteen hundred under General Manson, numbering about to thirty thousand men. They were veterans; the Federal forces about Lexington were all raw levies. General Wright seems to have thought Cincinnati was the Confederate objective. General Buell thought Smith intended to march westward, cut the railroad, and join Bragg in his expected movement on Nashville. General Nelson agreed, as usual, with General Buell. Indeed, his despatches read like an echo of his old commander's thought.

The day before, August 24th, General Wright gave General Nelson this order: "If the enemy is in force, get your troops together and do not risk a general battle at Richmond, unless you are sure of success. Better fall back to a more defensible position, say the Kentucky river, than risk much."

To this General Nelson had replied, from Lexington, on the same day:

"The enemy variously estimated from fifteen hundred to eight thousand at or near Richmond. I fear it is Kirby Smith that has come up. I will go to Richmond myself to-night."

Clinging fast to the hypothesis, that General Smith's objective was the Louis-

ville and Nashville railroad, which he wished to cut, en route to join Bragg in his expected move upon Nashville, General Nelson seems to have concluded that he would march west from Rogersville and London, rather than advance on Lexington, through Richmond. To meet this purely hypothetical and wholly absurd movement, instead of obeying the explicit order of his department commander, he directed Dumont to march to Danville, and sent Jackson with his brigade to Nicholasville, intending to concentrate at Lancaster to



have been attempted.

being the number of the two divisions which had made the wonderful march through Roger's Gap under his immediate command, entirely omitting from his estimate Heth's division of seven thousand, who came through Big Creek Gap, the brigade of cavalry which preceded them, and the five thousand from Stevenson's command, with which General Smith had been reinforced. Because he chose not to believe these reports, he felt at liberty to disobey the command of his superior.

While the Thousand slept in their first bivouac, General Bragg's order for his army to move out of the Sequatchie vallev by way of Sparta, en route to Glasgow, Kentucky, was being carried to his corps commanders. On that night, Buell's adjutant - general, Colonel Fry, telegraphed from the headquarters of at Decherd, Tennessee, to General Rousone, he can have it. We are all ready."

days later, as we have seen.

THE HELL-MARCH.

There were four days of quiet camp-life -the very poetry of war. The tents were pitched in a magnificent grove: a hundrouth until it echoed like a tiled floor but it is so characteristic of the class to

intercept the enemy. Had his views of beneath the tread, served as our drillthe Confederate general's strength and ground. We mocked at rumors of impurpose been correct, the combination he pending peril, because we heard that our planned might have been well enough: commander did so and read the veracious as against a superior force of veteran reports which appeared in the daily jourtroops, under an enterprising leader, it nals of the North. War news was manuwas a movement which should never factured far more readily then, and in more slipshod fashion than would be tolerated The simple fact is that General Nelson now. Anything to fill a column, the believed General Smith's strength did more startling and improbable it was the not exceed eight thousand men, that better, seemed to be the rule. In that way, the men who fought the battles became terribly tangled in regard to what really happened and what was reported to have happened. Not seldom the latter has gone upon the record as veritable history, and the former been forgotten or regarded as merely fanciful.

The days were full of duty; study and drill for officers and men alike. Squad and company movements, the manual of arms, and the simplest of battalion manœuvers were practised with the utmost assiduity. No such luxury as targetshooting was indulged, nor was vollevfiring permitted, except to the guard, who were allowed to fire their guns when relieved from duty. Because of this privilege, detail for guard duty was then as eagerly sought for as it came afterwards to be avoided. Fortunately, most of the regiment had been used to firearms from his chief, who was waiting to be attacked boyhood. The routine of loading was somewhat different, but the general hanseau, at Huntsville, Alabama: "No dling of the piece was the same. Our fight; Bragg is very slow; if he wants arms were the Springfield muzzle-loaders, an excellent weapon of its kind. But one Bragg was indeed "slow," - a whole cannot help wondering now, why was it week behind the date he had fixed to not until June, 1863, that the magazine begin his march to meet Smith in Cen-rifle was first used in action by our soltral Kentucky; but it would be still andiers? It was not because they were not other week, when he had crossed the procurable, for a half-dozen firms were Cumberland river without opposition, pressing their adoption on the govern-before the credulous and self-conscious ment. There are two reasons given: one Buell would believe that he was going to that there was a job behind the delay on Kentucky instead of coming to fight him which the fortunes of some of our statesupon a battlefield near Murfreesborough, men depended; another, that the officers for which he made special inquiry four of the regular army thought it an unjustifiable extravagance to put rapid-firing guns into the hands of volunteers. They insisted that only long training could prepare the soldier to use the muzzleloader effectually, and, of course, a much longer period would be necessary to teach them to load and fire a breech-loader. The dred acres of brown pasture, baked with reasoning was not entirely without fault,

which it was attributed, that one is in- quarters and don their side-arms, clined to believe both stories, and conclude that our army was deprived of more efficient weapons for two years, by the combined forces of prejudice and profit. Possibly, neither is the true reason; perhaps it was genuine fear that the more intricate mechanism of the magazine breechloader unfitted it for army use. At any rate, the fact remains, and the Thousand learned its manual with the cheerful ring of the iron ramrods in the empty barrels, to aid the officer in timing his commands

in firing-drill. On the 30th of August, the ninth day after muster-in, the regiment was engaged, between drills, in drawing the last of our equipments, blankets, overcoats, and shoes. Hitherto, we had had only a half a blanket apiece, and even this supply was somewhat short; but in the dogdays a little cover suffices. Most of the men had supplied themselves with rubber ponchos. The heavy double blankets which the placid quartermaster and his hustling sergeant deposited in every company street looked terribly burdensome to the perspiring soldiers, whose knapsacks were already full to bursting with the clothing which a generous government had heaped upon them with a too lavish hand. They had no more need of overcoats and double blankets in August, in the very stress of a Kentucky drouth, than they had for foot-stoves or warmingpans; but they had not yet learned to limit their demands to their necessities, and having a chance to draw supplies, supposed the correct thing was to take all that was going. Whoever ordered requisitions for winter clothing at that time, earned some deserved curses during the six eventful days that followed, and many more, afterwards, when the men came to realize how this extra clothing had eaten

into their pay accounts. The issue was but half-completed when the long-roll sounded for the first time in earnest. How the palpitating drums throbbed and echoed! How the quickening pulses answered! In all the world there is nothing like this instant, imperative call to arms. In a moment all else is forgotten. "Fall in!" echoes from end to end of the camp. The men lounging in their shirt-sleeves run for their clothes and equipments. Officers rush to their ment commander had ordered, behind the

A11 over the camp is the buzz of wondering inquiry, the snapping of belt-plates, and the hum of hurried preparation. Orderlies align their companies and begin their roll-calls. The adjutant passes down the line giving a hurried verbal order to each company commander:

"The regiment will move in an hour in light marching order, with two days' rations, and forty rounds of ammunition!"

The rations were unobtainable, but the ammunition was distributed, and the quartermaster ordered to follow with the rations. There were rumors of a fight in progress. The rumble of artillery had come to us on the sultry air just as the afternoon drill began; some said it was artillery, while others thought it thunder. There had been four heavy detonations in rapid succession, and then silence.

Just as the sun went down the Thousand marched out of its first camp, on its way toward a field of battle where the fight had already been lost. It was our first march. The road was the rough stone pike so common in Kentucky and Tennessee. It was past midnight when we halted, a dozen miles from Lexington, and throwing out pickets in front and on the flanks, lay down in a cornfield in line of battle and slept until dawn. Then we moved forward nearly to the Kentucky river, where we halted to allow the shattered fragments of a defeated army to pass us to the rear.

This time it was not the unexpected that happened: what had been clearly and unmistakably, indicated, had occurred. Kirby Smith had marched from Barboursville on the morning of the twenty-seventh. On the twenty-ninth his cavalry had driven in General Manson's pickets. That officer had formed his brigade and marched forward two or three miles, driving back the Confederate advance-guard in a sharp skirmish. He did not send any order to General Cruft, commanding the other brigade, two miles in his rear. It is evident that he shared the general belief, that instead of an invading force, the troops in front were a mere raiding party, which he coveted the glory of dispersing without assistance. So, instead of retreating, as the depart-

could maintain his position and needed no assistance. So, a little army of less than eight thousand raw levies lay all night in front of double their number of veterans, gathering through the night to overwhelm them. As if this were not odds enough, the Union general had divided his little force into two parts, with an interval of five miles between them. Before the fight began he had reported to General Nelson, at Lexington, that the enemy had appeared in his front and he "anticipated an engagement." Nelson immediately sent orders for him not to fight, but to retreat on the Lancaster road. With his usual impetuosity, which counted an order made as already executed. Nelson. racked with gout, procured a buggy and started for Lancaster, lavishing curses upon all whom he conceived in any way responsible for the discomfort he suffered.

He expected, very unreasonably, to find Manson at Lancaster, where he arrived at half-past nine on the morning of the thirtieth. Instead, he heard the booming of cannon in the direction of Richmond. Procuring fresh horses, he set out in the unfrequented byways, at half-past two already lost beyond the hope of recovery. and fight. A few obeyed; a wavering 210 killed, 844 wounded, and 4800 cap- the night they missed the way and fol-

Kentucky river, he advanced with only tured. One-third of the Army of Kenhalf his force and gave battle. Elated tucky had been practically annihilated. by apparent success, he fancied that he The blame, as usual, was laid upon the had driven back the whole force of the troops, who were said to have been enemy, and sent a message to the com- "struck with a panic," and "being raw mander of his other brigade, that he troops, broke and ran after a few volleys," instead of upon the rash and incapable general to whose blindness and flagrant disobedience of orders this great disaster was clearly due.

> With this tide of defeat, the Thousand returned to Lexington, where they arrived at nine o'clock at night in the midst of a drenching shower, only to meet an order to go on picket. They had marched with hardly half a day's rations, instead of the amount ordered, that being all the quartermaster could supply, and few had eaten since morning. These facts being reported, the order to go on picket was revoked, and they were directed to bivouac in the market-house, where coffee and an abundant supply of bread and meat were served to them. It was midnight when we sank to rest after our first march-a march of twenty-eight miles in less than thirty hours-on the rough pavement of the market-place, a foot-sore and weary multitude.

On the morrow, the evacuation of Lexington began. At eight o'clock we were ordered out on the Nicholasville pike. All day long the work of destroying government stores which had accumulated direction of the firing, and stealing along at this point went on. The smoke of their burning hung over the city, while in the afternoon he came upon the field clouds of dust rose from the roads to the westward leading to Versailles and Frank-He rode among the fleeing fugitives fren- fort, on which our wagon-trains were zied with rage, raining curses and blows already in motion. To the south and upon them, commanding them to stand southeastward were other dust-clouds, showing the course of the main body of line was formed. The enemy advanced the enemy, who, having crossed the with their accustomed yell; there were a Kentucky river, were advancing on Lexfew hasty volleys; then the line gave way ington, and of Heth's division, which and the tide of fugitives surged to the reached Winchester that afternoon. The rear, only to be hemmed in by the enemy's day was setting when the Thousand cavalry, which swarmed ahead of the marched through the streets of Lexingwings and enveloped the doomed multi- ton-the last regiment of the Army of tude as in a net. Wounded in the foot, Kentucky on its retreat to Louisville, raging with pain and chagrin, Nelson ninety-five miles away, as the crow flies, somehow escaped and reached Lexington a hundred and more by the roads we during the night of the thirtieth. Cruft's were to take. A small battalion of cavbrigade had been brought forward before alry waited at the outskirts of the town Nelson's arrival on the field, and was in- for us to pass. They were to constitute volved in the general rout. The loss was the mounted rear-guard. Some time in

lowed the first division of the wagon- tucky during General Nelson's disability. positions, that of rear-guard of an army fleeing from a victorious foe. So far as cavalry might, indeed, overtake us, but retreat to Louisville was made, gorge, making it practically impassable, right bank of the river, as seemed probable, we had only to cross to the left bank at Clifton and Frankfort and destroy three or four bridges to be safe from his pursuit for several days. If he divided his forces and left part upon the left bank, he would have this impassable barrier between them. This it was not at all likely he would do. When, therefore, we passed through Lexington and took the road to Versailles, we supposed the plan of retreat was to cross that river, destroy the bridges and ferries, and make it, at least, a temporary line of defense. The knowledge that before another nightfall we might be safe beyond this great defensive barrier buoyed us up with that rank of his volunteer subordinates. strange confidence a soldier feels when he believes that his commander has outwitted his antagonist.

The day before, General Nelson, suffering from the pain of his wound and the chagrin of his defeat at Richmond, had relinquished the command of the Army of Kentucky. This devolved the command of the forces about Lexington either upon Gen. James S. Jackson, commanding the cavalry brigade, or Gen. Charles Cruft, the junior brigadier in the disastrous fight at Richmond. Neither of these officers being professional soldiers, desired to assume a merely temporary command at so critical a juncture. Gen. Horatio G. Wright, commanding the department, therefore assumed the responsibility of usurping the constitutional powers of the President, and appointed Capt. C. C. Gilbert, of the First regular infantry, a major-general, and assigned him to the command of the Army of Ken- quent halts, but no rest. When the

train, which had taken another road, At the same time, and in the same curious leaving us on the eleventh day of our manner, Capt. William R. Terrill, of the service in the most trying of all military Fifth regular artillery, was made a brigadier-general.

It was under the command of General the enemy's infantry were concerned, we Gilbert, with Generals Jackson, Cruft, had one full day's start of them. Their and Terrill as subordinates, that the if we succeeded in crossing the Kentucky report of this movement is to be found river before they did so, we would be se- in the Official Record of the War of cure from attack thereafter. This river Rebellion, either by the officer in comflows through a deep and precipitous mand or any of his subordinates. This is especially singular when we resave by bridge or ferry, below a point flect that General Gilbert was a great nearly due south from Lexington. If the stickler for regularity, and his command enemy had crossed his main force to the must have consisted of at least eight thousand infantry, with two regiments of cavalry and three batteries of artillery. What accessions it received at Versailles and Frankfort is unknown. Surely, so important a movement of so considerable an army at so critical a time, was not of so little importance as to be unworthy of a report. The artillery was under the command of General Terrill. The cavalry rear-guard was commanded by Captain Gay, who was soon after made chief of cavalry of the Army of Kentucky, and then assigned to the same position in the Army of Ohio. He was another instance of a regular army captain assigned to high command without regard to the

> It had not rained for many weeks save the shower of the night before, which had hardly reached a mile west of Lexington. The dust lay ankle deep upon the hard, hot, limestone pike. forces that preceded us with their numerous wagons, had raised a cloud which hung over the road, shutting out even the walls and fences on either side. The setting sun shone red and dim through the yellow mass. Each man was weighed down with knapsack and accourrements. We knew nothing of our destination, or the length of the march before us. Had the knapsacks been burned at the outset. many more would have reached the goal. Men were invisible a few steps away; near at hand, they could only be distinguished by their voices. There were fre

column ahead got jammed up on itself, somewhere in front in which those who parched throat; while the perspiration made muddy channels down every face.

dust-cloud shut out the stars. By and by the moon rose; the night grew chill, but still the dust rose in choking clouds. The orders forbade details to leave the road in search of water. Men were sent on in advance, in hope that they might fill the canteens before the wells were drained. Long before midnight not a drop remained. In spite of orders, a few men were sent out to search for water. It was a strange country. The pools and streams were dry. The wells had been exhausted by those in front. Many of the people were compelled to haul water from a distance for domestic use. These details returned empty-handed as the others had done. About this time colored men came, one by one, and offered to bring water, to carry guns or knapsacks, -anything, if they could only follow us. They were loaded down with canteens and accompanied by a few men started for water. An hour after they returned, staggering under their loads of dripping canteens. Was ever water half so sweet! Yet we had scarcely begun to know what thirst was.

The march would have been a severe one to seasoned, unencumbered veterans: to these men, yet foot-sore, galled, and weary from their first long march, and weighted down with knapsacks, overcoats, and blankets, in addition to ammunition and accoutrements, it was terrible. After a time, the men ceased to scatter to the roadside when there came a halt. They had no strength to spare, and the roadside was almost as dusty as the pike. So they merely knelt down in their places, bowed themselves forward to relieve the strain on the straps that galled and cut into the shoulder, and slept. In the moonlight they looked like heaps of dust, or pilgrims fallen asleep at prayer. At the word, they stumbled to their feet, sometimes awake, sometimes asleep, and staggered on. The ambulances were soon full. It was said there were wagons fast, pressed on toward Frankfort. The

we waited until it straightened out, were unable to go farther might be trans-Sometimes it was a minute, sometimes ported. But when a man can go no farten or twenty minutes. The yellow, acrid ther, such provision is of little good. dust settled on beard and hair, got into We were the rear of the column; back the eyes and mouth, and burned the of us was only our own rear-guard and the enemy.

There were several alarms during the The night fell hot and murky. The night; firing off at the left, then at the right, then in our rear. It was probably marauding bands of guerrillas, who set upon our men in search of water. Once we were stampeded. There had been a longer halt than usual. The dusty fugitives knelt in the road, or were stretched out beside it. There was an uproar at the rear; the sound of galloping hoofs upon the pike. There was a cry of "Rebs!" "Cavalry!" Every sleeping figure sprang suddenly to life. Men ran over each other, stumbled, sprawled headlong, then rose and fled over the wall into an adjoining field; across that to a bit of wood. When the pike was clear, a big, gray mule came charging down it, frisking his tail, and making night hideous with his discordant bray. One lieutenant, who found himself, on waking, pinioned between two rocks, had no sooner extricated himself than, impressed with the ludicrousness of the situation, he posted himself in the middle of the pike, and between roars of laughter began to shout: "Fall in, One Hundred and Fifth Ohio!" He was cursed with a gift of mimicry, and it may be that half-unconsciously he imitated the tones of his superiors; but he had no purpose to give offense, nor any idea that his levity would disturb any one's self-complacency, until a man who was tugging at a bridle-rein remarked that he did not "see anything to make such a damned clamor over," adding, "You seem to think it funny, but we shall never hear the last of that darned mule!"

> Sure enough, we never have. At each reunion that beast is trotted out, and now everybody laughs at our "mule stampede." The lieutenant had to pay a sore price for his untimely jest, but in that case, as in many another, "he laughs best who laughs last."

> The morning was already hot and lurid as the dusty column crept through Versailles, and after an hour's halt for break

enemy had followed the cavalry by way of Big Spring, so that our rear was undisturbed until we were in sight of Frankfort. The sun was going down when we reached the capital of Kentucky. It is but twenty-nine miles from Lexington by the most direct route. The one by which we had come was half a dozen more. It could hardly be termed a march; it was a flight.

For the first time the Thousand saw at Frankfort, the semblance of an army. The streets were full of trains. Lines of blue-coated, dusty men found their way between them or lay stretched upon the sidewalks. The cavalry came scurrying in upon their jaded horses, reporting the enemy in force only a little way out. Columns were marching heavily this way and that, taking positions covering the roads from the eastward,

could see the long line of wagons moving toward the bridge, and stretching from the bridge away westward. It was evithis point, and equally evident that it was the river.

Thus far, we had known almost nothing of our commanding officers. We understood that we were in Colonel Anderson's brigade, and Gen. James S. Jackson's division; but as to what composed either the brigade or the division, we were without knowledge. Even now it is almost impossible to ascertain the facts. We knew that General Jackson was a Kentuckian, who had been in command of the cavalry of the Army of Kentucky before the fight at Richmond. Strangely enough, these two facts did much to in-



Drawn by F. Remington. A HALT ON THE MARCH.

Guns were posted on commanding emi- alry. Then, too, there was a bewildering nences. Despite the seeming confusion, intricacy in southern roads to those acthere were not lacking evidences of order, customed only to the parallel roads and For a half-hour we lay upon a gentle slope cross-roads of the sections and townships which overlooked the valley, and watched of the northwest. Going over the hills or the dispositions made for defense. We around them, with no apparent regard to direction; crossed here and there by more or less used country roads; intersected everywhere with bridle-paths and private dent that there was to be no long delay at ways, the northern soldier, until he became accustomed to it, was sure to get to be held until the trains had crossed lost whenever he tried to find his way anywhere except upon the main roads that led from one important point to another. We assumed that, being a Kentuckian, General Jackson was able to meet the Confederate cavalry on even terms. We were to make his acquaintance that night, not altogether pleasantly.

As we entered the city, we found a company of fifty or more special constables ranged on each side the street, and having in custody a number of colored men who had been taken, not without remonstrance, from among the ranks of the regiments which preceded us. These men spire confidence in him. The raw recruit were slaves who had taken this method to has always a most exaggerated idea of escape from bondage. They represented the efficiency of cavalry, and the Con- to their masters, and to every inhabitant federate general, John H. Morgan, had al- of a slaveholding community, simply so ready made famous the Kentucky cav- much money. The taking them from

their masters, or aiding them to escape, then published, and the owner had to pay man who was guilty of it, to the lowest possible level of popular contempt. Of this fact, the men who composed the Thousand were only dimly conscious. They knew, of course, that it was a technical violation of law to aid a slave's escape; but so absolutely antipodal was the state of society from which they came, that it was there looked upon as one of the least blameworthy of crimes. while to willingly aid in returning a fugitive to slavery would have exposed one

to almost universal contumely.

developed a curious conflict of authority. not be required to admit every one within his lines who claimed to be in search of a fugitive, nor was he required to presume that every colored man was a slave. Some officers naturally construed the general orders upon the subject freely in favor of the master, and allowed any one who claimed to be in search of a runaway, free access to their camps. Others construed it strictly in favor of the slave, and demanded not only the identification and location of the slave within his lines, but also proof of ownership, before he would allow the master to take him, except with his own consent. In like manner, orders intended to prevent fugitives from seeking shelter in the camps, were construed to prevent the master from entering.

In every Southern State the apprehension and return of runaway slaves to their caused considerable confusion by trying masters was a profitable business. Any one was authorized to arrest a colored man, traveling without a written pass or

was, in the estimation of people accus- a certain sum for his apprehension, the tomed to the legal estate of slavery, the sheriff's fee for advertising, board, and most infamous of crimes - a crime so other legal charges. It was naturally despicable, indeed, as to debase the white supposed that many slaves would seek to escape with the retreating army, and a large force of deputies was accordingly set to watch the passing column and arrest every colored man on the chance of his being a runaway slave. Not only was this proceeding abhorrent to the sentiment of the northern soldiers, but they felt especially grateful toward those who had brought water and borne their burden during the terrible march of the preceding night. No doubt the colonel shared this feeling. At any rate, the command was halted, bayonets fixed, and The policy of the government in the with closed ranks and shouldered arms early days of the war had been to return we entered the city. A few colored men, all fugitives who came into our lines; still loaded with burdens, walked between afterwards, the return of fugitives to dis- the fours. The constables made a rush loyal owners in states in rebellion was here and there. The lowered guns obprohibited, while in other states the army structed them. There were threats and was forbidden to interfere with the opera- blows; several of the men were struck; tion of the state laws; that is, the Fed- there was a rumor that one or two of the eral troops were to stand neutral, neither constables were hurt. We marched on, taking the slave from his master nor some of the constables following, and compelling him to return. This policy were halted on the pavement in front of the state-house. It was growing dark. Of course, a commanding officer could Fires were lighted in the streets, and water heated to make coffee when the rations should be procured. A guard was set outside the line of gun-stacks. One or two frightened negroes were hidden under heaps of knapsacks and blankets, next the wall. The constables watched from across the way. There was a clatter of hoofs, and General Jackson with some of his staff and a few of his body-guard, halted opposite the center.

"Who commands this regiment?" In the temporary absence of his superiors, the major stepped forward and

saluted.

"What regiment is it?"

"The One Hundred and Fifth Ohio."

"I am told your men resisted the officers, who sought to arrest a lot of runaway niggers."

"A lot of men with clubs and pistols to break through our ranks," said the

major.

"They were officers, sir," answered the duly authorized free papers, and lodge general. "Several of them were injured." him in jail. A description of him was His tones were loud and angry. The men crowded up to the guard-line to hear. The firelight shone on the guns and bright trappings of the general's suite.

"I understand some of the men were hurt, also," responded the major.

"Served them right; they should not have resisted the officers of the law."

"The officers ought not to have obstructed our march," was the quiet reply.

"Did they have any warrants?" piped a voice from the sidewalk. A law student in the ranks was airing his acquirements.

"It is not necessary;—any man has a right to arrest a runaway negro in Kentucky," replied one of the staff.

"You will put the men who assaulted the officers under arrest."

The major bowed.

One of the constables stepped forward

and spoke to the general.

"Could you identify him?" he asked.
"A slight man, with a mustache, you say? Really, there seem to be several such here—looks as if they were mostly all boys," he added, with a smile, as he glanced up and down the firelit lines of dusty faces. This remark was greeted by a laugh.

"What has become of the niggers the runaways?" inquired the general.

The major shook his head.

"How do you tell a runaway nigger from any other?" asked one in the crowd.

"There is one of them now," interrupted one of the general's attendants, pointing to the right of the regiment, where Captain Edwards' servant, Ned, was preparing supper for the officers of Company A. The general spurred his horse toward the man. A dozen voices shouted to Ned, who turned to run.

"Stop, you black rascal!" shouted the general. "Who do you belong to?" he continued, as he reined up beside the trembling negro, who stood, coffee-pot in hand, looking up at his questioner.

"He is my servant, sir," said Captain Edwards, rising from the curbstone and saluting. Edwards was the nattiest officer in the regiment, and despite the hard march we had been through, was as trim a soldier as one need ever hope to see.

"Your servant! Where did you get him? I know the nigger—have seen him in Lexington. Who do you belong to?" he repeated, addressing Ned.

The captain answered for him. "I brought him from home; he is on the rolls as my servant."

"Be jabers," said one of Company A, coolly, "thin he belongs to Uncle Sam, the same as the rist av us!"

"Major," said the general to that officer, who had followed him down the line, "do you know that nigger?"

"I have understood that he is Captain Edwards' servant."

"Did he bring him from Ohio?"

"I don't know."

"Is he a free man?"

"I know nothing about it."

"You are all Abolition nigger-stealers," said the general, hotly. "I know the man: you can take him."

The constable advanced.

"I don't see," said one of the onlookers, "that it is very much worse to steal a slave than to steal a free man, and not half as likely to be profitable.

"I wonder what old Abe would say to that sort of 'contraband' business," said another; in the darkness it was impossible to designate individuals.

These suggestions seemed to be not without weight to the general, whose new

honors could only ripen into veritable rank by presidential approval.

"Never mind," he said to the constable; "I may be mistaken. Major, you will see that the man is forthcoming when he is wanted. We can't stop to hunt up everybody's runaway niggers, now."

He turned and galloped down the street, while Ned proceeded with his duties. There was no braver or more loyal soldier than Gen. James S. Jackson. He had served his country in the war with Mexico; was a member of the Thirty-first Congress, and was one of the first of the Union men of the South to spring to arms. This incident serves, feebly enough, to show the strength of sentiment which such men had to combat in the perform-The country for which ance of duty. they gave so much, has been strangely unappreciative of a class who sacrificed more than any other for their devotion to it.

The incident shows how far apart in moral sentiment were the gallant general and the troops he led—the one fighting for the Union to save slavery, the other inspired by hope for its destruction. It

from his lips.

It was ten o'clock when the weary demeal was eaten, and we sunk again to from heat and thirst. Water was still slumber. At two o'clock we were roused by whispered orders. The city was quiet drained. Men crowded about them, pushfensive position against the progress of an enemy upon the right bank of the nant pools two miles away. river, to which the Confederates had evidestroying the bridges, could here delay we had crossed, would be the gravest of

It is little wonder. Within four days they for a month. had marched seventy miles; laid in line of stoutest of yesterday were now the faintest. Slowly we dragged our way to our position in the retreating column and stumbled painfully along in the darkness. With the dawn came the sound of firing in our rear. The enemy's cavalry had crossed the bridge we kindly left standing for their accommodation. A line of battle was formed upon a range of hills that lay across the pike. The men cheered as they of battle, it was with the feeling that we Water was very scarce and of the poorest

was a strange fate which decreed that the would rather die than retreat farther. But last sight that met his eyes should be the enemy did not attack. As a matter the very "nigger-stealers" whom he con- of fact, his force was insignificant; but, temned, rushing forward into the jaws having once underestimated his strength, of death to execute the last order that fell our officers had now gone to the other extreme and greatly overrated it.

Several times during the day, this matail brought with dragging feet the ra- nœuver was repeated. The march grew tions they had been hours in seeking. more and more difficult with each hot and Coffee was quickly made; a half-cooked dusty mile. Men dropped unconscious save for the careful tread of moving coling, scrambling, often fighting for a few umns and the steady rumble of wagons muddy drops. Tormented by heat and crossing the bridge and on the pike be- thirst, and almost smothered by dust, we Our destination was now clear. dragged ourselves through the long hours Frankfort, lying on both sides of the of that day, bivouacking at night by the Kentucky river, offered a fairly good de- roadside, with no water save what was found after a long search in some stag-

At one o'clock came the order to move, dently crossed. A very small force, by and we again plodded on, halting every few minutes, the men dropping on their a pursuing army for several days. If faces in the dust, would be asleep almost the retreat was necessary, as it no doubt before the command was given. When was, to leave the bridges standing after the word came to march, many of them would rise and stagger on, still asleep. military crimes. But the authorities of That day we marched until eight o'clock Kentucky protested against the bridges at night, and then bivouacked, for the being burned. So they were left stand- first time since leaving Lexington, in a ing until the enemy, in turn, found it nec- green field with plenty of good water. essary to retreat. Then they were burned. The next day, September 5th, a little after The foot-sore and exhausted soldiers noon, we reached the suburbs of Louiswere with difficulty roused from sleep. ville, where we were to remain in camp

The Thousand had been under arms battle one night and marched all of an- continuously, on the march, on picket or other. Every foot was blistered; every in line of battle, ever since the sunset of muscle was sore. Heavy with sleep they August 30th, six days, less three hours. staggered to their places in the line, the In that time, they had marched about stronger aiding the weaker ones. There one hundred and forty miles, an avwere moans and curses. Some of the erage of twenty-three miles for each twenty-four hours. During this time, they had slept in line of battle on the night of the thirtieth, three hours; five hours in Lexington, the night of the thirty-first; marched all the night of September 1st, halted six hours in Frankfort, the night of the second; halted five hours the night of the third; slept eight hours the night of the fourth; making in the whole six days only twenty-seven filed out of the cloud of dust, at the pros- hours of sleep. The heat was overwhelmpect of being allowed to fight. As we ing; the dust suffocating; the hot limeflung ourselves upon the ground in line stone pikes scorched the blistered feet.

quality. Such a march would have been a trying and terrible ordeal for the toughest veterans.

against the names of all who fell out, and that they be also deprived of six months' pay. The order itself was a military of

After three years of service, more than two hundred of the survivors have testified that it was the severest work required of them. At its close, hardly one-third of the regiment was fit for duty. Scores were permanently disabled. The ultimate loss was greater than that sustained in any action in which the regiment afterwards participated. It is fitly designated the "Hell-March." It was a terrible experience for men who had hardly marched a mile before, and whose service only numbered fifteen days when it was ended.

General Nelson, in the meantime, had arrived at Louisville, and soon after resumed command. With his customary impatience, he made a great clamor over the fact that a considerable number of men had straggled from the column on this march, and been captured and paroled by the enemy. These he denounced as cowards and malingerers, as if their fault had been wilful, and not the natural result of exhausted nature. That a column of eight thousand infantry, all of them troops of less than a month's service, should make such a march with a loss of less than five hundred men, is to the credit, rather than the discredit, of the regiments of which it was composed. The irate general, however, demanded that the severest punishments be imposed upon all such. Moved by this action of his superior, no doubt, Colonel Hall, forgetful of the strain his men had been called upon to bear, ordered that the entry, "straggled on the retreat from Lexington," should be placed on the muster-rolls

that they be also deprived of six months' pay. The order itself was a military offense hardly less grave than that charged against its victims. Leaving out of consideration the fact that the colonel had no power to make an order depriving an enlisted man of pay at his own discretion, it should be remembered that these men were condemned, without trial, for an offense of which most of them were not guilty. By far the greater number were undoubtedly permitted to leave the ranks to go in search of water by the officers in command of the companies. Wandering about in a strange region, faint with prolonged exertion and loss of sleep, they sat down to rest, expecting soon to proceed upon their quest or renew the task of overtaking the regiment. Exhausted nature would have its way, and they did not waken until summoned to surrender by our pursuers. In a case which came under the writer's own notice, a man from whose shoes blood had oozed at every step for miles, was told by his captain that if he left his place he would lose his position as a sergeant. When he could endure no longer, he fell out, exclaiming: "I cannot take another step!" The rear-guard missed him in the darkness, and he was captured. Probably only a small proportion of those who fell under this sweeping and unlawful condemnation, were physically able to complete this terribly exhausting march. The order was afterward revoked through the intervention of Governor Tod, who saw both its injustice and illegality. Military law is of necessity, arbitrary in character, but only the rankest despotism punishes without a hearing.



A THREE-STRANDED YARN.

THE WRECK OF THE LADY EMMA.

BY W. CLARK RUSSELL.

MISS OTWAY OPENS THE STORY.

DATE the opening of this narrative February 24, 1860.

I was in the drawing-room of my father's house on the afternoon of that day, awaiting the arrival of Captain Burke, of the ship Lady Emma, and his wife, Mary Burke, who had nursed me and brought me up, and, indeed, been as a mother to me after my own mother's death in 1854; but she had left us to marry Capt, Edward Burke, and had already made two voyages round the world with him, and was presently going a third.

My father sat beside the fire reading a newspaper. His name was Sir Mortimer Otway; he was fourth baronet and a colonel: had seen service in India, though he had long left the army to settle down upon his little seaside estate. He was a man of small fortune. Having said this, I need not trouble you with more of his family history.

I was his only surviving child, and my name is Marie; I have no other Christian name than that; it was my mother's. My age was twenty and my health delicate, so much so that Captain and Mrs. Burke were coming from London expressly to talk over a scheme of my going round the world in their ship for the benefit of my appetite, and spirits, and voice, and, perhaps, for my lungs, though, to be sure, they were still sound at that date.

Ours was a fine house, about a hundred years old; it stood within a stone's throw of the brink of the cliff; walls and in places, and there was a charming scene of garden on either hand the carriage drive. drowning." I stood at the window with my eyes fasof gray steel to the dark sky of the ho- blankness. rizon, where here and there some mov-It was blowing a fresh breeze, and the self by steam. But, then, for health it

throb of the ocean was cold with the icelike glances of the whipped foam. Presently it thickened overhead, and snow fell in a squall of wind that darkened the early afternoon into evening with smoking lines of flying flakes. The sea faded as the reflection of a star in troubled water. My father put down his newspaper and came to the window. He was a tall man, bald, high-colored; his eyes were large and black, soft in expression and steady in gaze: his beard and mustache were of an iron-gray; he was sixty years old, yet still preserved the soldier's trick of carrying his figure to the full height of his stature.

"At what hour do you say they're to be here?"

" At three."

He glanced at his watch, then out of the window.

"That doesn't look like a scene where a delicate girl's going to get strong !"

"No," I answered with a shiver. "But a crown piece on a chart will often cover the area of worse weather than this, and for leagues beyond all will be glorious sunshine and blue water."

"It's hard to realize," said I, straining my eyes through the snow for a sight of the sea.

"Well," he exclaimed, turning his back upon the window, "Bradshaw is an able man; his instances of people whom a seavoyage has cured are remarkable and weigh with me. Living by the seaside is not like going a voyage. It's the hundred climates which make the medicine. Then the sights and sounds of the ocean are Are sailors ever ill at sea? tonical. Yes, because they carry their sickness hedges encompassed some seventy or on board with them, or they decay by eighty acres of land, pleasantly wooded bad usage, or perish by poisonous cargoes. The sea kills no man - save by

He took a turn about the room, and I tened upon the sea, which went in a slope stared through the window at the flying

"Steam is more certain," he went on, ing mass of vapor was hoary with snow, thinking aloud, "You can time yourdoesn't give you all you want. At least, we can't make it fit in your case. It would be otherwise if I had the means, or was able to accompany you, or if I could British skipper. put you in charge of some sober, trustworthy old hand. Steam might signify several changes to give you the time at sea that Bradshaw prescribes. It's out of the question. No; Mrs. Burke's scheme is the practicable one, and I shall feel easy when I think of you as watched over by your old nurse. But I have several questions to ask. When are they coming? Have they missed their train?"

About five minutes after this they were I took Mrs. Burke up-stairs.

shown in.

Mrs. Burke, my old nurse, was a homely, plain, soft-hearted woman, a little less than forty years of age at this time. She was stout and pale, though she was now a traveler, with large, short-sighted blue eyes, a flat face, and a number of chins. She was dressed as you would wish a homely skipper's wife to be: in a neat bonnet, with a heavy Shetland veil wrapped around it; a stout mantle, and a gown of thick, warm stuff. She sank a little courtesy to my father, who eagerly stepped forward and cordially greeted his old servant: in an instant I had my arms round her neck. You will believe I loved her when I tell you she had come to my mother's service when I was a month old, and had been nurse and maid, and looked after me as a second mother down to the time when she left us to be married.

Her husband stood smiling behind her. He was short-an Irishman; he looked the completest sailor you can imagine, that is, a merchant sailor. He was richly colored by the sun, and his small, sharp, merry, liquid blue eyes gleamed, and trembled, and sparkled in their sockets like a pair of stars in some reflected hectic of sunset in the western sky. Everything about him told of heartiness and good humor; there was something arch in the very curl of his little slip of whiskers. A set of fine white teeth lighted up his face like a smile of kindness whenever he parted his lips. He was collar, the figured waistcoat and bell-

as inside a sentry-box, he stood up on slightly-curved, easily-yielding legs, a model of a clean, wholesome, hearty,

Of course, I had met him before, I had attended his marriage, and was never so dull but that the recollection of his face on that occasion would make me smile, and often laugh aloud. He had also, with his wife, spent a day with us after the return of his ship from the first voyage they had made together. My father shook him cordially by the hand. He then led him into the library, whilst

We could have found a thousand things to say to each other: there were memories of sixteen years of my life common to us both : I could have told her of my engagement and shown her my sweetheart's picture; but I was anxious to hear Captain Burke on the subject of my proposed voyage, and so, after ten minutes, we went down-stairs, where we found my father and the captain seated before a glowing fire already deep in talk.

The captain jumped up when I entered; my father placed a chair for Mrs. Burke, who courtesied her thanks, and the four

"Well now, Mrs. Burke," said my father, addressing her very earnestly, "your husband's ship is your suggestion, you know. You've sailed around the world in her, and you can tell me more about the sea than your husband knows"-the captain gave a loud, nervous laugh-" as to the suitability of such a ship and such a voyage as you recom-

mend to Miss Otway."

"I am sure, Sir Mortimer," answered Mrs. Burke, "that it'll do her all the good, and more than all the good, that the doctors promise. I should love to have her with me." She turned to look at me affectionately. "Since you can't accompany her, sir, I'd not like to think of her at sea, where I was, too, and me without the power of seeing after her. No steamer could be safer than the Lady Emma." The captain uttered another nervous dressed in the blue cloth coat and velvet laugh of good-humored derision of steamers. "If you will trust my dear young shaped cloth trousers of the merchant lady to me, I'll warrant you, Sir Mortiservice in those days; and over all, he mer, there's not the most splendid steamwore a great pilot-cloth coat whose skirts ship afloat that shall make her a comfortfell nearly to his heels, inside of which, abler home than my husband's vessel."

"I have some knowledge of the sea, Captain Burke," said my father. "I have made the voyage to India. What is the tonnage of the Lady Emma?"

"Six hundred, sir."

"That's a small ship. The Hindostan was fourteen hundred tons."

"You don't want stilts aboard of six hundred tons to look over the head of the biggest sea that can run," answered the captain.

"She sails beautifully, and is a sweetlooking ship," said my old nurse.

"When do you start?" asked my father. "I hope to get away by the end of the

next month, sir."

"Your little ships, I understand, which are not passenger vessels, often sail very deeply loaded, and are unsafe in that

way," said my father.

"There can be nothing wrong with a man's freeboard, sir, when his cargo is what mine's going to be next trip: stout, brandy, whisky, samples of tinned goods, a lot of theater scenery, builders' stuff, like as doors and window-frames, patent fuel, and oil-cake."

"Gracious, what a mixture !" cried his

wife.

"What, I suppose, is termed a general cargo," said my father: "not the best of

cargoes in case of fire."

"What cargo is good when it comes to that, sir?" asked Captain Burke, smiling. "We must never think of risks at sea any more than we do ashore. To my fancy, there's more peril in a railway journey from here to London than in a voyage from the Thames round the world."

"Miss Otway must be under somebody's care, Sir Mortimer," said Mrs.

Burke.

"How do you think she looks?"

"Not as she'll look when I bring her back to you, sir?"

"It's astonishing what a lot of coloring matter there is for the blood in sea air," said Captain Burke. When I was first going to sea I was as pale as a baker; or, as my old father used to say, as a nun's lips with kissing of beads; afterwards"—he 'And the color isn't always that of rum either," he added.

"Where does the ship first sail to, nurse?" said I.

"Tell my young lady, Edward," she auswered.

"We're bound to Valparaiso, and that's by way of Cape Horn," said the captain. "We there discharge, fill afresh, and thence to Sydney, New South Wales; thence to Algoa bay, and so home - a beautiful round voyage."

"Right round the world, and so many lovely lands to view besides," exclaimed Mrs. Burke, looking at me; "always in one ship, too, in one home, Sir Mortimer. with me to see to her. Oh, I shall love

to have her!"

My father looked out of the window at the wild whirl of snow that had thickened till it was all flying whiteness through the glass, with the coming and going of the thunder of a squall in the chimney, and a subdued note of the snarling of surf, and said: "Cape Horn will be a cold passage for Miss Otway."

"It's more bracing than cold," said Captain Burke. "People who talk of Cape Horn and the ice there don't know, I reckon, that parrots and humming-birds are to be met with in Strait Le Maire. I was shipmate with a man who's been picking fuschias in such another snowfall as this down on the coast of Patagonia."

"Miss Marie, you should see an iceberg; it's a beautiful sight when lighted

up by the sun," said my nurse.

"Beautifuller when under the moon and lying becalmed like a floating city of marble, and nothing breaking the quiet save the breathing of grampuses," exclaimed the captain.

In this strain we continued to talk for some time. My father better understood than I did that my very life might depend upon my going a voyage, and spending many months among the climates of the ocean. All the doctors he had consulted about me were agreed in this, and the last and most eminent, whose opinion we had taken, had advised it with such gravity and emphasis as determined him upon making at once the best arrangements practicable, seeing that he was unable to accompany me for several reasons: one, and a sufficient, being paused, with an arch look at his wife. his dislike of the sea when on it. Our long talk ended in his proposing to return with Captain Burke to London, to view the Lady Emma, which was lying in the East India docks, and my old nurse consented to stop with me until he returned, so that we could chat about the voyage and think over the many little things which might be necessary to render my trip as happy and comfortable as foresight could contrive. The one drawback that kept my father hesitating throughout this meeting with Captain Burke and his wife was this: the Lady Emma would not carry a surgeon. But that question, they decided, could be left until he had seen the ship and satisfied himself that she would with an easy heart send me away in.

II.

MARIE'S SWEETHEART.

My father went to London next day with Captain Burke. I denied myself to callers, and until my father came back remained alone with my old nurse, once or twice taking a ramble along the sea-shore when the sun shone; but my health was bad, and I had as little taste for walking

as for company.

I suffered from a sort of spiritlessness and a dull indifference to things. My health was the cause of my low-heartedness; but there were many reasons now why I should feel wretched. It was not the merely leaving my father and my home for a twelvemonth and longer to wander about the ocean in a ship, in search of color for my cheeks, and light for my eyes, and strength for my voice; but for my health. I should have been married in the previous October, and now my marriage must be put off until the sea had made me strong, and I was to be sundered from the man I loved for months and months.

My betrothal had happened while my old nurse. Burke, was away; it was, therefore, news to her, and she listened to all about it with eager, affectionate attention. I told her that my sweetheart was Mr. Archibald Moore, the son of a private banker in the city of London. I had met him at a ball in the neighborhood, and within a month of that we were engaged. He was the sweetest, dearest, handsomest -I found I did not want words when it came to my praising him and speaking of my love.

She said: "Does he often come to see you, Miss Marie?"

"Often? Every week. He is occupied with his father in the bank, and can only spare from Saturday to Monday."

"Will he be here next Saturday?"

"I hope so."

"Dear heart! Oh, Miss Marie, I have a thought. Will not his father spare him to sail with us, so that you can be together?"

I shook my head.

"Why not, Miss Marie?"

"Father would not hear of it."

She reflected and exclaimed: "And Sir make me such a sea-home as he could Mortimer would be quite right. To be sure, it would not do. Is it not a pity that we have to live for our neighbors? Neighbors have broken folks' hearts, as well as their fortunes. Why shouldn't you two be together on board my husband's ship? But the neighbor says no. and people have to live for him. Drat the prying, squinting starer into one's windows! he forces us to dress out a better table than our purses can afford, and to give balls when we ought to be cutting down the weekly bills. But he don't like the sea, my dear. There are no neighbors at sea. Unfortunately, the wretch stops ashore; people have to come back, and so there he has 'em again !'

> Mrs. Burke made much of Mr. Moore's portrait. She had never seen a handsomer gentleman. What was his age? I answered thirty. "All the sense," said she, "that a man's likely to have he'll have got between thirty and forty. It'll comfort you, Miss Marie, to remember that Mr. Moore's thirty when you're away. He's old enough to know what he's about; he's made up his mind;

there'll be no swerving."

This was a sort of gabble to please me. She knew my nature, and when and how to say just the sort of thing to set my spirits dancing. In truth, the part of my proposed banishment hardest to bear was the fear that a long absence would cool the heart of the man I loved.

On Friday, Mrs. Burke left us to rejoin her husband, whose home was in Stepney, and on that day my father returned. He was in good spirits. He had seen the Lady Emma, and thought her a fine ship. She was classed high, and was as yachtlike as a model. Mr. Moore had accompanied him and Captain Burke to the docks, and was wonderfully pleased with the vessel and her accommodation.

tor," said my father.

" How?" I asked.

"Burke has consented to engage one. I told him if he would carry a surgeon, by which I mean feed and accommodate him in the ship, I would bear the other charges. He has a month before him, and may find a man who wants a change of air, and who'll give his services for a cabin and food; or, which is more likely, he'll meet with some intelligent young gentleman who wants to try his 'prentice hand on sailors before starting in practice ashore. Doctors find sailors useful as subjects; they can experiment on them without professional anxiety as to the result."

But now that it was as good as settled I was to sail in the Lady Emma, I looked forward to meeting Mr. Moore next day away alone. All the risks of the sea lay Who could be sure that the ocean would everybody expects; but a big ship to do for me all that the doctors had prom- look after is a big business to attend to." ised? Who was to say it would let me return alive? I might never meet my man who by this time should have been teen months. So Burke calculates it. A thought made the prospect of meeting you strong, it will not be too long." him next day almost insupportable.

and crying; he took me in his arms and beside me, holding my hand and nursing it, and looking into my face for a little while, scarcely able to speak. How shall I describe him, whose love for me, as you shall presently read, was such as to make my love for him, when I think of him as human expression.

He was tall and fair; eyes of a dark blue, deep, but gentle, and easily impassioned. He wore a large yellow mustache, and was as perfectly the model of an English gentleman in appearance as Captain Burke was a merchant skipper.

of my voyage.

your old nurse, but I judge, from what ful miracle of the molding of a breaker

"We've got over the difficulty of a doc- your father tells me, you could not be in better and safer hands. Captain Burke seems a fine fellow-a thorough, practical seaman. I wish I could accompany you."

"Oh, Archie, I shall be so long alone!" "Ay, but you're to get well, dearest. I've thought the scheme over thoroughly. If there's nothing for it but a voyage, as the doctors insist, your father's plans, your old nurse's suggestion, could not be bettered. Who would look after you on board a big steamer? There is nobody to accompany you-no relative-nobody we know, no party of people I can hear of to entrust you to-making, I mean, such a voyage as the doctors advise. I should be distracted when you were gone, in thinking of you as alone on a steamship at sea, with not a soul to take with dread and misery. I was going the least interest in you save the captain; and captains. I believe, do not very much before me. I was low and poor in health. love these obligations. Civilty, of course,

"It will be a terribly long voyage." "To Valparaiso, and then to Sydney, love again. When I said good-by to the and Algoa bay, and home. About fourmy husband, it might be for ever, and the long time, Marie. But, if it is to make

In this wise we talked; then, there He found me alone in the drawing- being two hours of daylight left, I put on room. The servant admitted him and my hat and jacket, and taking my lover's closed the door. I stood up very white arm went with him slowly down the great gap in the cliffs to the sea-shore. It kissed me, led me to my chair, and sat was sheltered down there. The yellow sunshine lay upon the brown sand and flashed in the lifting lengths of seaweed, writhing amidst the surf, and had a sense of April warmth, though it was a keen wind that then blew, a northerly wind, strong, with a hurry of white clouds, he sat beside me that day, as I follow like endless flocks of sheep, scampering him in memory afterwards, too deep for southwards. The sands made a noble promenade, surf-furrowed, and hard as wood: the breakers tumbled close beside us with a loud roar of thunder, and exquisite was the picture of the trending cliffs, snow-clad, gleaming with a delicate, moon-like light in the pale, airy blue distance. All sights and sounds of He began immediately upon the subject sky and sea appealed to me now with a meaning I had never before found in "It's hard we should be parted; but I them. I would stop my lover, as we like your little ship, Marie. I've not met walked, to observe the swift and beauti-

would pause to mark the flight of the gulls, stemming the wind aslant in curves of beauty, or sailing seaward on level, tremorless wings, and flinging a salt, ocean music, with their short, raw cries through the harsh bass and storming accompaniment of the surf.

" If the breeze does not make me strong here, why should the sea make me strong

elsewhere?" I said.

"It is the change. I have heard of desperate cases made well by travel."

"It is hard! To think that my health should force me to that!" I exclaimed, pointing to a little vessel that had rounded out of a point about two miles distant, and was lifting the white seas to the level of her bows as she sank and soared before the fresh wind, every sail glowing like a star in the sunshine, her rigging gleaming like golden wire, her decks sparkling when she inclined them toward us, as though the glass and brass about her were rubies and diamonds. 44 I wonder if she will ever return, Archie?"

"Why not? Cheer up, dearest."

We watched her till she had shrunk into a little square of dim orange, with the freckled green running in hardening ridges southwards, where the shadow of the early February evening was deepening like smoke, making the ocean distance past the sail look as wide again to the imagination as the truth was. I shuddered and involuntarily pressed my lover's arm.

"The wind is too cold for you," he said, and we slowly returned home up through the great split in the cliff, amongst whose hollows and shoulders the roar of the surf was echoed back in quick, sudden, intermittent notes, like the sound of guns at sea.

From this date until I sailed, my time was wholly occupied in preparing for the voyage. I went to London with my father to shop; Mrs. Burke accompanied us, and half our purchases were owing to her advice. Fortunately for har, as the wife of a sailor who was able to take her to sea with him, she was childless and could afford to

as it arched out of the troubled brine, give me much of her time. They reckoned soaring into a snow-storm, curving head- I was to be away fourteen months; but long to the sands, with the foam flying Captain Burke advised us, having regard from its rushing peak like white feathers to the character of the voyage, especially streaming from a dazzling line of hel- to the passage from Valparaiso to Sydmets: and once or twice, as we talked, I ney, to stock for a round trip of eighteen months; this, he thought, would provide for a good margin. Clothes for all the climates, from the roasting calms of the Line down to the frost-black gales of the Horn, were purchased; many delicacies were laid in-a hundred elegant trifles of wine and condiments, of sweetmeats and potted stuffs, to supplement the captain's plain table, or to find me a relish for some hungry, howling hour when the galley fire should be washed out. Mr. Moore wrote that he frequently visited the ship, and that he and Mrs. Burke, between them, were making my cabin as comfortable as my old nurse's foresight and experience could manage.

So went by this wretched time of wait-

ing and of preparation.

About a fortnight before the ship sailed. my father received a letter from Captain Burke, telling him that he had engaged a surgeon. His name was Owen. His age. he said, was about forty-three; he was a widower. The loss of his wife and two daughters three years before this period had broken him down; he was unable to practice; had traveled in the hope of distracting his mind; but his means were slender, and he was unable to be long away, or go far; yet, when he endeavored to resume work, he found himself unequal to his professional calls. He thereupon sold his practice, and had lived for some months in retirement upon a trifling income. Having seen Captain Burke's advertisement, he offered his services in exchange for a free voyage. The captain described him as a gentlemanly man, with excellent credentials, and considerable experience.

III.

THE LADY EMMA.

On the morning of a day forever memorable to me as the date of my departure from my home, namely, March 31, 1860, my father and I went to London, there to stay till April the second, when it was arranged that I should go on board the ship at Gravesend. My grief worked like a passion in me, yet I was quiet; my resolution to be calm whitened my cheeks, but, again and again, my eyes brimmed

in spite of my efforts.

My father dared not look at me or speak as we stepped into the carriage. His complexion was ashen, like that of one who is ill from sleeplessness. Often during the preceding fortnight I had thought his resolution to let me go would torsake him: I had guessed-I had hoped this from his looks and endearments, and believed he would falter and refuse to part with me. Oh, I so feared this going away alone, even though I was to be in the company of my faithful, dear Mrs. Burke, my very heart so shrank up in me at the idea of saying farewell to my lover, with the chance of never seeing him more, that sometimes, when I said my prayers, I'd ask God to make me too ill to leave. But all this I kept to myself. My health was the one consideration: I knew that both my lover and my father dreaded delay, and that, fret as I might, it must end in obedience to the doctors.

It was a melancholy, gray day when I drove with my father to the station; the east wind sang like the surf in the naked, iron-hard boughs, and the sea streamed in lines of snow into the black, desolate distance, unbroken by a gleam of sail, save that, as we turned the corner, which gave me a view of the ocean, I caught sight of a lonely, black and red carcass of a steamer staggering along, tall and naked, as though plucked, with a hill of foam under her counter; the melancholy and desolation of the day was in her, and no picture of shipwreck could have made that scene of waters sadder.

I had bidden good-by to all I knew during the week; there were no more farewells to be said. We entered the train, and when we ran out of the station I felt that my long voyage had truly commenced. I'll not linger over my brief stay in London. Mr. Moore was constantly with me; indeed, we were seldom apart during those two days of my waiting to join the ship at Gravesend. His father and sister called to say good-by; I was too poorly and low-spirited to visit them. In truth, I never once left the hotel until I drove with my father and Mr. Moore to the station to take the train to Gravesend.

Before embarking, however, I made the acquaintance of Mr. Owen, the surgeon of the ship. He had occasion to be in the west end of London, and Mrs. Burke asked him to call. I viewed him with considerable curiosity, for it was not only that he was to be my medical adviser; I could not but reflect that I was to be locked up in a small ship with this man for very many months, with no other change of society than Captain and Mrs. Burke. I was pleasantly disappointed in him. I had figured a yellow, long-faced, melancholy man, with a countenance plowed by frequent secret weeping and furrowed by pitiful memories and nightthoughts black as Dr. Young's. Instead, there entered the room briskly, with a sideways bow, cleverly executed whilst in motion, the right arm advanced, a short, plump figure of a man in a coat cut in something of a clerical style, short legs, and a face that would have been reasonably full but for its long aquiline nose and contraction of lineaments, due to a big bush of hair standing out stiff in minute curls over either ear; otherwise, he was bald.

My father was extremely polite to him. He stayed an hour and partook of some slight refreshment. He stared at me very earnestly, felt my pulse, considered me generally with polite professional attention, and, after he had put certain questions, said to my father with sig-

nificant gravity:

"You may console yourself, sir, for the temporary loss of your daughter; I do not scruple to say that, in sending her on this voyage, you will be saving her life. I believe I can recognize her case, and strongly share the opinion of those who prescribe a long residence on board ship upon the ocean."

My father's face lighted up; nothing, I believe, could have heartened him more at the moment than this assurance. Mr. Moore took Mr. Owen by the hand and

said :

"We shall be trusting her to you, sir. She is very dear to me. We should be man and wife but for her health."

"All that my anxious attention can give her she shall have," said Mr. Owen, bowing over my 'over's hand.

Yet he did not stay his hour without letting us see, poor fellow, that in the

depths of his heart he was a grieving man. He said nothing; no reference was made to his affliction; but in certain of her as a picture?" pauses the pain of memory would enter his face like a shadow, and sometimes he would sigh tremulously, as one in sorrow sighs in sleep, scarcely knowing, you saw, that he did so.

When he was gone, my father said to Mr. Moore that his spirits felt light again, now that he had seen what sort of man it was who would have charge of my health.

"Taking all sides of it," he said, "I don't think we could have done better. Marie goes with an old nurse, who loves her as her own child; Mr. Owen seems a kind-hearted, experienced, practical man. I hope he understands that our appreciation of his kindness will not be restricted to bare thanks on the return of the vessel. The more I see of Burke the better I like him. He is an honest, experienced seaman from crown to heel, and in saying that I am allowing him all the virtues. No! the arrangements are wholly to my satisfaction, and my mind is at rest. It will be like a long vachting trip for Marie; she will have a fine ship under her, and all the seclusion and comfort of a vacht, combined with the safety of ample tonnage. I am satisfied. It was a cruel difficulty; we have had to meet it; it is well met, and now, Marie, there is nothing to do but wait. Have patience. The months will swiftly roll by—then you will return to us, a healthy young woman, full of life, and color, and vigor, instead of"-his voice broke off in a sob, and he turned his head away. I ran to him, and he held me whilst I cried till I had no more tears to shed.

On April the second we went down to Gravesend. Mr. Moore accompanied us. Captain Burke had telegraphed that the Lady Emma was lying off that town, and would tow to sea in the afternoon of the We arrived at Gravesend at about twelve o'clock, and drove to a All my luggage had been sent on board the ship in the docks. Mrs. Burke waited for us in a room overlooking the river; here she had ordered luncheon to be served. She seemed hearty and happy; kissed me, and courtesied to my father and Mr. Moore, and, taking me to the window, said :

"There she is, Miss Marie. There's your ocean home. What do you think

She pointed to a vessel that was straining at a buoy almost immediately opposite. A tug was lying near her. It was a young April day; the sunshine thin and pale, the blue of the heavens soft and dim, with a number of swelling bodies of clouds humped and bronzed, sailing with the silent majesty of line-ofbattle ships into the southwest. A brisk wind blew, and the river was full of life. The gray water twinkled and was flashed in places into a clearness and beauty of bluish crystal by the brushing of the breeze. The eye was filled and puzzled for some moments by the abounding tints and motion. A large steamer with her line of bulwarks palpitating with heads of emigrants, was slowly passing down; another with frosted funnel and drainings of red rust on her side, as though she still bled from the scratches of a recent vicious fight outside, was warily passing up; beside her was a large, fullrigged ship towing to London, and the sluggish passage of the masts, yards, and rigging of the two vessels, the steamer sliding past the other, combined with the sudden turning of a little schooner close by, all her canvas shaking, and with the heeling figure of a brig, her dark breasts of patched canvas swelling for the flat shores opposite, a spout of white water at her forefoot, and a short-lived vein of river-froth at her rudder; then, close in, two barges heaped with cargo, blowing along stiff as flagpoles under brown wings of sail; these, with vessels at both extremities of the reach, coming and going, interlacing the perspective of their rigging into a complication of colors and wire-like outlines, forever shifting; all this wonderful changing life, I say, adding to it the trembling of the stream of river, the pouring of smoke, the pulling and shivering of flags, put a giddiness into the scene, and for some moments I stared idly, with Mrs. Burke beside me, pointing to the Lady Emma.

My eye then went to the ship, and rested upon as pretty a little fabric as probably ever floated upon the water of the Thames. I may venture upon a description of her and speak critically: indeed, I must presuppose some knowl-

discover, I was long enough upon the ocean, under circumstances of distress scarcely paralleled in the records, to learn by heart the language of the deep, how to speak of ships and tell of sailors' doings, and I cannot but name the things of the sea in the language in which the

mariner talks of them.

The Lady Emma was a full-rigged ship; tons in burden; she was a wooden ship -iron sailing vessels were few in those days; she was painted black, but, though loaded for the voyage, she sat lightly upon the water, and a hand's breadth of water-line like a gilding of sunlight, the length of her. Her lower masts were white; her upper masts a bright yellow; her yards were very square; or, as a landsman would call them, broad; the most inexperienced eve might guess that when clothed in sail she would spread wings as of an albatross in power, breadth, and beauty for a meteoric flight over the long blue heave.

"How do you like her, Miss Marie?"

said Mrs. Burke.

"She is a pretty ship, I think," I answered.

"She is a beauty," said the good woman. "She outsails everything."

"She has a fine, commanding lift about the bows," said Mr. Moore, passing his arm through mine. Captain Burke tells me she has done as much as three hundred and twelve miles in the twenty-four hours.'

"So she has, sir," said Mrs. Burke.

"I wish she'd maintain that rate of sailing all the time Marie is aboard," said

my father.

"Oh, Sir Mortimer, this going will seem but as of yesterday's happening when yonder ship's again returned, and your dear girl's in your arms strong, fine, and hearty, rich in voice, and brighteyed as she used to be when a baby. These voyages seem long to take, and when they're ended it's like counting how many fingers you have, so easy and quickly it all went."

Lunch was served, and we seated ourselves; but my throat was dry and I

edge of the sea in you, otherwise I shall My father and Mr. Moore pretended to be at a loss; for, as you shall presently eat; suddenly, looking up, I met my sweetheart's gaze; a look of inexpressible tenderness and distress entered his face. and starting from his seat he went to the window, and kept his back to us for a few minutes. Mrs. Burke went to him and whispered in his ear. I perfectly understood that she begged him to bear up for my sake; indeed, it needed but for my father and my lover to give way for me between six hundred and seven hundred to break down utterly, with a menace of consequent prostration that might put an end to this scheme of a voyage on the

very threshold of it.

We left the hotel at two o'clock and walked slowly to the pier. I was closely new metal sheathing burned along her veiled. I could not have borne the inquisitive stare of the people as we passed. Whilst we waited for a boat, I watched a mother saying good-by to her son, a bright-haired boy of fourteen, in the uniform of a merchant midshipman. She was in deep mourning, a widow, and I had but to look at her pale face to know that the boy was her child. The lad struggled with his feelings; his determination to be manly, and not to be seen to cry by the people standing roundabout, nor to go on board his ship with red eyes, doubtless helped him. He broke away from her with a sort of sharp, sobbing laugh, crying: "Back again in a year, mother, back again in a year!" and left her. She stood as though turned to stone. When in the boat, he flourished his cap to her; she watched him like a statue, with the most dreadful expression of grief the imagination could paint. Never shall I forget the motionless figure of that widowed mother, and the grief in her face, and the look in her tearless eyes.

"There's plenty of sorrow in this world," said Mrs. Burke, as the four of us seated ourselves in the boat, "and there's no place where more grief's to be seen than here, owing to the leave-takings and the coming back of ships with news."

"Master of a ship fell dead yesterday just as he was a-stepping ashore," said the waterman who was rowing us. "Bad

job for his large family."

"You'll take care to have a letter ready before the ship is out of the Channel, Marie," said my father. "Mrs. Burke, your husband will give Miss Otway every could swallow nothing but a little wine. opportunity of sending letters home?"

"I'll see to it, Sir Mortimer."

We drew alongside the ship. Captain Burke and Mr. Owen stood at the gangway to receive us. When I went up the ladder, supported by my father, Captain Burke, with his hat off, extended his

hand, saying:

Lady Emma. She has received my whis-She knows her errand and what's expected of her. She'll keep time, Sir Mortimer; and the magic that'll happen betwixt the months whilst our jibboom is pointing to as many courses as the compass has marks, is going to transform this delicate, pale young lady into the heartiest, rosiest lass that ever stepped over a ship's side."

"I pray so, I pray so," exclaimed my

father.

"Captain Burke is not too sanguine," exclaimed Mr. Owen, with a smile.

"When do you start?" asked Mr. Moore.

"Soon after three, sir, I hope," answered

Captain Burke.

I ran my eye over the ship. The scene had that sort of morbid tragic interest to me which the architecture and furniture of a prison cell takes for one who is to pass many months in it. I beheld a long white deck, extending from the taffrail into the bows, with several structures breaking the wide, lustrous continuity of it; one forward was the galley, the ship's kitchen; on this side of it was a large boat with sheep bleating inside her: whilst underneath was a sty full of pigs, flanked by hencoops whose bars throbbed with the ceaseless protrusion and withdrawal of the flapping combs of cocks and the heads of hens. Near us was a great square hatch covered with a tarpaulin, and further aft, as the proper expression is, was a big glazed frame for the admission of light into the cabin; some distance past it, a sort of box curved in the aspect of a hood, called the companionway, conducted you below. At the end of the ship was the wheel, like a circle of flame, with the brasswork of it flashing to the sun, and immediately in front stood the compass-box, or binnacle, glittering like the wheel, and trembling to its height upon the white planks like a short pillar of fire.

forecastle, and a man leaned in the little doorway of the galley in a red shirt, bare to the elbows, eveing us with a pair of fat, dough-like, tattooed arms crossed upon his breast, a picture of stupid, sulky curiosity.

We stayed for a few minutes talking in "Miss Otway, welcome on board the the gangway; Mrs. Burke then asked me to step below and see my cabin, and I went down the steps followed by the rest, and entered the ship's little plain state-

room.

I stopped at the foot of the ladder and drew my breath with difficulty. was it? An extraordinary sensation of icy chill had passed through me. It was over in an instant, but it was as though the hand of death itself had clutched my Was it a presentiment working so potently as to affect me physically? Was it some subtle motion of the nerves influenced by the sight of the interior, and by the strange shipboard smells in it, which there was no virtue in the hanging pots of flowers to sweeten? I said nothing. My father halted to the arrest of my hand, supposing I wished to look about me, and yet, oh, merciful God! when I date myself back to that hour and think of me as entering that cabin for the first time, and then of what happened afterwards, I cannot for a moment question, nay, with fear and awe I devoutly believe, that the heart-moving sensation of chill which came and went in the beat of a pulse was a breath off the pinion of my angel of fate or destiny, stirring in the thick-ribbed blackness of the future at sight of my first entrance into the scene of my distress. Do not think me fanciful nor high strained in expression or imagination. My meaning will be clear to you.

The Burkes had done their best to make this state-cabin comfortable to the eye. Shelves full of books were secured to the ship's wall; a couple of globes of gold and silver fish hung under the skylight, where, too, were some rows of flowers hanging in pots. A couple of tall glasses were affixed to the cabin walls, and the lamp was handsome and of bright metal. A new carpet was stretched over the deck, and the table was covered with a cloth so that the interior looked like a little parlor or living-room ashore. I also observed a A number of sailors hung about the stove in the fore end of the cabin; it

looked new as though fitted for this par- and cried, but I had few tears left to shed ticular voyage.

"Dear Miss Marie, let me show you your bedroom," said Mrs. Burke.

A narrow corridor went out of this living-room in the direction of the stern; on either hand were cabins, four of a side; Mrs. Burke threw open a door on the port hand, and we entered a large berth. Two had been knocked into one for my use.

"This is bigger than anything I could have secured for you on board a steamer,"

said my father.

My old nurse's eyes were upon me whilst I gazed around. They had made as elegant a little bedroom of the place as could possibly be manufactured on board a plain, homely sailing ship. Every convenience was here, and the furniture was handsome. They had put pink silk curtains to my bunk, which was single. that is, the upper shelf was removed, so that I should have the upper deck clear above me when I pillowed my head. They had prettily decorated with drapery a large oval glass nailed to the bulkhead; this mirror caught the light trembling off the river, and brimming through the porthole, and filled the interior with a radiance of its own as though it had been a lamp. The carpet was thick and rich; the arm-chair low and soft. A writingtable stood in the corner and on it was a lovely bouquet; the berth was rich with the smell of those delicious flowers, the atmosphere sweet as a breeze in a garden of roses. It was my lover's gift, sent on board the ship just before she left the docks, but I did not know this until after I had said good-by to him.

"It is as comfortable as your bedroom at home, Marie," said my father.

"I find your thoughtful heart everywhere here, nurse," said I.

"We have all done our best, and our best shall go on being done," she answered, smiling; and meeting my father's

world courtesies.

"I don't think you'll find anything missing, sir," said Captain Burke, "from Mr. Owen's medicine-chest down to the smallest case of goodies in the lazaretto."

" My daughter is in kind hands. I am satisfied," said my father, and he came to me and put his arm around my neck.

I leaned my cheek against his breast

-I had almost wept my heart dry.

Captain Burke, saying he was needed on deck, went out; Mrs. Burke and Mr. Owen followed; my father stepped into the state-room that I might be alone with

my lover.

He caught me quickly to his heart and kissed me again and again with a passion of grief and love. We had exchanged our vows before over and over. We could but kiss and whisper hopes of a sweet meeting, of a lasting reunion by and by. It was like a parting between a young bride and bridegroom, but with a dreadful significance going into it out of my health and out of the thought of the perils of the sea. Indeed, a sadness as of death itself was in that parting, and I know Archie felt that as I did, when he released me and stood a moment looking into my white face.

When we went into the cabin I found my father earnestly conversing with Mrs. Burke. He was asking questions about my luggage and effects, and impressing certain things upon her memory. A few minutes later Captain Burke came down the companion steps, and halting before he reached the bottom, exclaimed:

"Sir Mortimer, I'm sorry to say the tug'll be laying hold of us now almost

immediately."

My father started, looked at me with something frantic in the expression of his face, then crying, "Well, if the time has come-" and took me in his arms. Then with tears standing in his eyes, and gazing upwards, he asked God to bless me and to protect me, and to restore me, his only child, in safety and in health to him; and now, speechless with grief, mutely looking a farewell to Mrs. Burke, who herself was weeping, he went on deck, followed by Mr. Moore, whose leavetaking here had been no more than a single kiss pressed upon my forehead as gaze she dropped him one of her little old- I stood beside the table after my father had released me.

> When they were gone I sank into a chair, and cried and cried; Mrs. Burke looked with wet eyes through a cabin window. She was right to let my grief have its way. After a little I heard the voices of men chorussing on deck; overhead people regularly tramped to and fro. Mr. Owen came into the cabin and said:

you above. The air will refresh you, and the picture of the river is striking and full of life."

"Come, dear Miss Marie, with me," said Mrs. Burke, and I put my arm through hers and went on deck.

I stood still on discovering that our voyage was begun. Our ship had been moored to a buoy; there had been no anchor to weigh, no wild music of seamen nor hoarse quarter-deck commands to give the news of departure to those under deck; the little tug had quietly manœuvered for our tow-rope, and now the ship's bows were pointing down the river, her keen steam shearing through the froth of the paddle-wheels ahead with some sailors heave-hoing as they dragged upon the ropes which hoisted certain staysails and jibs; the old town of Gravesend was sliding away upon the quarter; I strained my eyes in vain for a sight of the boat in which my father and Mr. Moore might have been making for the shore. Well, perhaps, that I could not distinguish her. I think it would have broken my heart then to have seen them, thus, for the last time, making their way ashore for that home I was leaving for months, and perhaps forever!

"We have started, nurse!" I exclaimed. "Yes, dear," she answered. "Do not make haste to cease crying. Let nature work by degrees in her own fashion. I shall soon see my dear girl looking proudly with health, and oh! the joy of your meeting with your father and Mr. Moore, and my happiness when I see them staring at you scarce knowing you for your beauty and brightness."

The water blazed with sunshine; the merry twinkling of it by the fresh April wind made the whole Reach a path of dazzling light. Twenty vessels of all sorts were about us; some leaned with rounded canvas soft as sifted snow, with yellow streaks of metal glancing wet to the light out of the brackish foam that wanted the shrillness and spit of the froth of the brine; some lifted bare skeleton scaffolds of spars and yards as they towed past; some were no bigger than a Yarmouth smack, and some were great steamers and deep and lofty ships from or for the I asked her what she meant by her "hus-Antipodes. But whatever you looked at band's watch," thinking she meant the was beautiful with the hues of the after- time-keeper in his pocket.

"Pray, Miss Otway, let me conduct noon, the backing of the green land, the inspiration of the sea, the spirit of ocean liberty wide as the horizon that is boundless, and high as the air through which the clouds blow.

IV.

MARIE BEGINS HER VOYAGE.

This was the first voyage I had ever made. I was born in England, and was left there at school when my mother went round the Cape to India on the second visit my father paid to that country. I had never in my life crossed a wider breast of water than the English Channel between Folkestone and Boulogne. Everything here then, you will suppose, was wonderfully new to me; infinitely stranger, indeed, than had the ship been a steamer, whose funnel and masts have commonly but little in them to bewilder the land-going eye.

Hundreds of times had I watched ships passing over the blue or gray waters which our house overlooked; but they were as clouds to me, indeterminable though beautiful decorations of the deep; I knew nothing of their inner life, of one's sensations on board, what the sailors in them did. I looked up now, and beheld three masts towering into a delicate fineness to the altitude of their own starry trucks, with yards across, rigging complex as the meshes of a web, white, triangular sails between. A sailor stood at the wheel floating off from it with the easy, careless posture of the sea, his knotted hands gripping the spokes of the gleaming circle. A stout-faced man in the tall hat of the London streets, his neck swathed in a red shawl, walked up and down the deck near the cabin skylight. Mrs. Burke told me he was the pilot. She pointed to a man who was standing on the forecastle, as though keeping a lookout on the tug, and said that he was Mr. Green, the first mate of the ship; indeed, the only mate. The boatswain, she informed, who was not a certificated officer, would take charge of her husband's watch when the ship was at sea.

She talked thus to distract my mind.

is divided into two companies or watches. called port and starboard; the starboard watch is the captain's and the other the rior, despite its civilizing details. mate's. Let us walk a little. Already you are looking better, positively."

Here Mr. Owen joined us.

"I declare, doctor," exclaimed Mrs. Burke, "that Miss Otway has already got a little color in her cheeks, more even since we left Gravesend than, I warrant, Sir Mortimer has seen in her the last twelvemonth gone. If she means to begin to look well so soon, how will it be with her, sir, when this ship's bowsprit is pointing the other way, and we shall be all ready to go ashore?"

Mr. Owen, in a soft felt hat, an academic bush of hair under either side of it, like the cauliflower wig of olden days, and a warm, heavy, black cloak, might have passed for a clergyman. He asked permission to stroll the deck with us, and pointed out objects ashore and upon the water with an intelligence that proved him the possessor of a talent for color.

Once he broke off in what he was saying to look at the land; he sighed deeply, yet forcing a smile, said to Mrs. Burke: "That parting should never be a sad

one which promises a happy meeting at the cost of no more than patience."

"Truly, indeed not," said Mrs. Burke. "It is the meeting—it is the meeting; promise that, and what is the leave-taking?" he exclaimed, and was all on a sudden too moved to speak; he faintly bowed, and went to the ship's side and looked at the shore.

We did not long remain on deck. I found the wind cold; my head slightly ached; I was weary with the exhaustion which follows upon fretting. Mrs. Burke went with me to my cabin, and we spent a long while in recalling old memories. and most of the time she was cheerfully busy in seeing that my things were in their place, and that I wanted for nothing.

The night had drawn down dark over the ship when we passed from my berth into the state-cabin. It was about seven o'clock. Supper was ready. The table was bright with damask, and silver, and flowers; under the skylight the large globe lamp glowed steadily, and filled the said Mrs. Burke. interior with the soft radiance of spermoil. I heard some men singing out on "It's river so far. We're towing through

"Why," she said, "every ship's crew deck, and the noise of ropes flung down upon the planks. The sound was strange, and put a sort of wildness into this inte-

> A young, sandy-haired youth, long and lank, in a camlet jacket, stood at the foot of the companion steps and swung a bell, with evident delight in the noise he made. Mr. Owen started up from a corner of the cabin on seeing us, and exclaimed:

> "There is a brave wind blowing. Captain Burke hopes to be off Deal by mid-

"That will be famous work," said Mrs. Burke. "But this is a clipper ship."

"Are we sailing?" said I.

"Yes. Some canvas is spread, But the tug still has hold of us," responded Mr. Owen.

I felt no movement in the ship. She was going along with the seething steadiness of a sleigh. Just then Captain Burke came below. His composed, cheerful face, peak-bearded, with red hair and arch, merry Irish eyes, seemed to bring a new atmosphere of light into the place. He addressed some friendly, sympathetic question to me; we then seated ourselves. I on the captain's right and Mr. Owen at the foot of the table.

It was my first meal at sea, if, indeed, the ship could then be called at sea, and memorable to me for that reason. I had tasted no food since breakfast, and now tried to eat, but less from appetite than from the desire to please my old nurse. My chat with her before supper had determined me to fight with my grief, to regard the voyage as a long holiday yachting excursion, which should be happy if I accepted it as a twelvemonths' diversion, that was to end in making me a new woman, and in fitting me to become a wife. It was this last point that Mrs. Burke had insisted upon, and like a good many ideas which are obvious and commonplace when uttered, it took my fancy, lighted up my views as though it had been a sort of revelation, and whilst I sat at supper I was so composed that more than once I caught Mr. Owen dart a glance of surprise at me when I answered or put a question.

"The sea is very smooth here, Edward,"

"There's no sea yet," he answered.

what's called the Warp, near the Nore, droop of the left eyelid put the expression whose light ye should be able to see, Miss Otway," said he, getting up and ducking and bobbing to command the Mrs. Burke and I sat at a little distance whole compass of a cabin window.

"I wonder the ship doesn't run the tug

down," said Mr. Owen.

The captain looked at me with his merry

eyes and chuckled.

"Ay, we're a match for the old slapper, even with nothing on us but fore and aft canvas and two topsails," said he. "I wish Sir Mortimer was with us. Here's a voyage to thread the strands of his years with a heart. I don't know that ever I met a gentleman I took a greater fancy to, unless it's Mr. Moore," and he gave me a bow whilst I smiled, feeling a faint glow in my cheeks.

"There'll be a full moon at eight," said

"So there will, sir, thank God," answered Captain Burke. "We sailors can never have too much light. No, not even in our wives' eyes," said he, with an askant arch look at Mrs. Burke.

And now he began to talk. Though without the brogue in his tongue, he had the fluency and humor of his country. He was full of stories of adventure and experience; scarce a sea he had not navigated in his day. His wife watched me eagerly, and if ever I smiled her face lighted up and her kind eyes shone. All his efforts were directed to cheer me. Observing Mr. Owen smelling at an egg, he exclaimed : "What's that you've got?"

"Something laid too soon; captain."

" Doctor, I know a sailor who made an experiment. He put a number of French eggs under a sitting rooster, and what d'ye think was hatched? Cocks and hens in the last stage of decrepitude. They hopped and staggered about in his little back yard, and died of old age in twenty-four hours. That was his test of a bad egg. If he wanted to make sure, he hatched it."

Thus ran his careless, good-humored gabble.

He went on deck presently, and the mate, Mr. Green, came below to get his supper. He was a middle-aged man, of a very nautical cut in figure and clothes, with a sneering face and a beard of wirv iron hair covering his throat, though he shaved to the round of his chin, and a of an acid leer into that side of his face.

Mr. Owen had withdrawn to his cabin. upon a comfortable sofa near the stove. The mate squared his elbows and fell to work slowly but diligently, often lifting his knife to his mouth and chewing with

the solemnity of a goat.

"He rose from before the mast," said Mrs. Burke, "I hope he's a good sailor. This is his first voyage with my husband. He holds a master's certificate, but that don't signify much, I expect. A man wants to know human nature to command a crew of sailors. He's been a common seaman himself, and fared ill, and worked hard on a starvation wage, as most of the poor creatures do, and that's likely to make him hard with the men and unpitying. It's always so. It's the person who's been in service that makes the exacting mistress."

All this she spoke softly. She then inquired of the mate how the weather was

on deck.

"Why, not so fine as it is here, mum," he answered. "There's a vast of stars. but 'tis black till the moon comes up."

"Where are we now?"

"The Girdler ain't far off," he answered, masticating slowly.

He did not seem disposed to talk, and answered with grimaces and the awkward air of a man ill at ease.

I was looking at his square, sturdy figure, with his weather-plowed face, and the muscles all about it working like vigorous pulses to the movement of his jaws, when I felt a slight motion of the ship; a gentle, cradling heave of the deck; the lamp and all things pendulous swayed; creaking noises arose from all parts; a sudden giddiness took me; the movement was repeated with the regularity of a clock's tick.

"Isn't the sea getting up?" exclaimed Mrs. Burke, staring at the gleaming ebony of the skylight windows.

The mate arrested the tumbler whose contents he was turning into his mouth, to distend his lips in a grin which he probably thought concealed.

"Why, I thought we were still in the

river?" cried Mrs. Burke again.

The mate, picking up his cap, rose, contorted his square figure into a bow

returned presently, and said that the river had widened into a sea, with dangerlights sparkling here and there, and the full moon rising solemnly and beautifully upon the port bow. She hugged herself, and said it was blowing fresh, and the ship, under several breasts of canvas, was chasing the little tug, which was splashing ahead as fast as she could go.

"We're doing between seven and eight miles an hour. Only think!" she cried, "we shall be opening the lights of Margate very soon. To think of Margate, and the sands, and the shrimps, and us sailing past it to the other end of the world! How do you feel, my dear?"

I answered plainly that I felt sick. "You will suffer for a day or two," said she, "and then you'll take no more notice of it than I do. What is that?"

The sounds proceeded from Mr. Owen's cabin.

"They'll never get a cure for it," said Mrs. Burke, looking in the direction of the doctor's berth.

I lay motionless, feeling very uncomfortable and ill. Mrs. Burke gave me some brandy and put toilet vinegar to my head. She advised me to go to bed, but I begged leave to rest where I was. The motion of the ship grew more lively the further she was towed toward the mouth of the river, where the weight of the field of water past the Forelands would be in every heave. At last, a little while after ten o'clock, I told Mrs. Burke I felt as if the fresh air would revive me, on which she wrapped me up in shawls and helped me, on deck. She walked on firm legs with the ease of an old salt, whilst I so swung and reeled upon her arm that I must have fallen twenty times but for her support. But, nevertheless, the moment I emerged through the little companion hatch, with its load of warm atmosphere closing behind me in a sensible pressure of mingled cabin smells and heat, I felt better; a shout of bright, strong, moonlit wind fair betwixt my parted lips swept away for the time all the nausea; I breathed deep and looked about with wonder.

It was a fine, noble night-scene of water me to my cabin.

to us, and went up the companion steps. and ship. We were following the tug The motion of the vessel affected me, under three topsails and a main top-Mrs. Burke got a pillow and made me gallant sail and a flight of fore and aft comfortable on the sofa, and wrapping canvas; the sails swelled pale as steam herself in a shawl went on deck. She into the moonlight air, carrying the eye to the fine points of the mastheads, whose black lines were beating time for a dance of stars. High up was the moon, full. vellow, and glowing; if land was near, it was buried in the wild, windy sheen under the orb; the water rolled in liquid silver, islanded here and there by the black flying shadows of bodies of vapor. hurling headlong down the wind northeast; ahead the black smear of the tug's smoke, full of sparks, with a frequent rush of crimson flame out of the funnel's throat, was flying low.

Captain Burke came from the pilot's side to salute me, and pointing abeam to starboard (I offer no excuse for writing of the sea in the language of the sea), ex-

claimed:

"There's Whitstable somewhere down there, Miss Otway. And yonder should be Herne bay. With a powerful telescope, we should presently be able to see the bathing-machines on Margate beach."

"What is that out there?" I asked. "A Geordie," he answered; "a north

country collier."

She was swarming along, a very spectre of a ship, lean, visionary, glistening like the inside of an oyster-shell in the moonlight, which whitened the black hull of her into the same sort of misty sheen that was upon the water till she was blended with the air brimful of moonlight, making a mocking phantom of her to fit in with the desolation beyond, where you saw a red star of warning hinting at ooze, and at white crawling streaks, and at a pallid rib or two, with some fragment of mast upward pointing in a finger of wreck, dumbly telling you whither the spirit of the rest of it all had flown.

I watched our little ship bowing in pursuit of the tug; she courtesied her white cloths to the moon, and the brine flashed at her bows at every plunge, and went away in a wide, rich race astern, for there was the churning of the paddles in it too.

But soon I was overcome by nausea once more: the magic of the fresh air failed me, and, yielding now to Mrs. Burke's entreaty, I suffered her to carry

After this, for the next four or five days, I was so miserably ill that I lay as one in a fit or swoon, scarcely sensible of more, and therefore remembering but little more, than that Mrs. Burke was hour after hour in my cabin, sleeping beside me on a mattress during the night, and watching over me throughout that distressing time with touching and unwearied devotion. Mr. Owen was too ill to visit me, but what could he have done? Did he cure his own nausea?

Indeed, we met with very heavy weather The wind shifted shortly in the channel. after the tug had let go of the ship, and blew a moderate breeze out of the southeast; but in the morning the breeze freshened into a gale; a head sea ran strong, short, and angry, the captain drove the vessel along under shortened canvas, with sobbing decks and spray-clouded bows, as I learnt; but to me, inexperienced as I was, her behavior seemed frightfully wild and dangerous. I sometimes thought she was going to pieces; my cabin was aft, the machinery of the helm was nearly overhead, and the noise of it, when she plunged her counter into the foam and the rudder received the blow of some immense volume of rushing brine, sent shock after shock through the planks, and through me as I lay in my bunk.

But the stupor of seasickness was upon I had no fear; had the ship actually gone to pieces, I do not think I could orshould have opened my mouth to cry out; all that I asked for was death, and I was so sick even unto that state that I cannot remember I even once wished myself at home, or thought for an instant of my

father or Mr. Moore.

But on the fifth day I was well enough to sit up and partake of a little cold fowl and wine, and next day I was on deck.

By this time we were clear of the English channel, and I looked around me at the great ocean, swelling in long lines of rich, sparkling blue under the high morning sun. Far away, blue in the air, were some leaning shafts of ships, and at the distance of a quarter of a mile a large steamer was passing, steering the same road as ourselves.

Weak as I was after my long confinement below, dazzled and confused too by the splendor of the morning and the novelty and wonder of that windy scene of our Mrs. Burke.

bowing ship, clothed in canvas, gleaming like silk, to the trucks, I could not but pause with a start of admiration when my sight went to that steamer. Captain Burke seeing me, as I leaned on his wife's arm, crossed the deck, and after some commonplace of genial greeting told me that yonder vessel was a French man-ofwar. She was round-sterned, with portholes for guns there, and two white lines, full of gunports, ran the length of her tall, shapely sides. She was ship-rigged and lifted a lustrous fabric of square canvas and delicate cordage to the soft blue skies. a wide space of whose field the gilded balls of her trucks traced as she rolled heavily, but with majesty, crushing the water at her bows to the impulse of her sails and propeller into a heap of splendid whiteness like to the foam at the foot of some giant cataract. She was the noblest seapiece I had ever beheld: the tricolor was at her gaff-end; a blue vein of smoke, filtering from a short, black funnel, scarcely tarnished the azure over the horizon betwixt her fore and main masts; a great gilt eagle was perched, with outstretched wings, under her bowsprit, and seemed to be poised for a soaring flight, as though affrighted by the roar of spume beneath; her decks were a blaze of light and color when she rolled them toward us, with the sparkle of uniforms, the flash of sunstars in bright metal, and gleams breaking from I know not whence, like sudden flames from artillery.

He placed chairs, and Mrs. Burke and I seated ourselves. I could now look about me with enjoyment of what I beheld. The sun shone with some warmth, and the wind blowing freely out of the west was of an April mildness. The whole life of the universe seemed to be in that ocean morning, with our ship in the middle of it, bowing as she drove over the long blue knolls. The hour was half-past eleven. Smoke was feathering down upon the water over the lee side out of the chimney of the galley, through whose door, as I looked, I saw a sailor emerge, holding a steaming tub, with which he staggered in the direction of a little square hole in the forecastle. Immediately after, a second sailor rolled out similarly bur-

dened.

"The men are going to dinner," said

"What do you give them to eat?" I asked the captain.

"To-day," said he, "they'll dine on beef

and pudding."

"It sounds a good dinner," said Mrs. Burke. "But all the while I'm at sea. I'm wondering how sailors contrive to do their work on the food they get."

"Go and put those notions into their shaggy heads forwards and there'll be a

mutiny," said the captain.

"Beef as tasteless as one's boot if one could imagine it boiled," said Mrs. Burke; "pudding like slabs of mortar, biscuits which glide about on the feet of hundreds of little worms called weevils. Edward has had to live on such food in his day, and I believe it is the beef and pork of his seafaring youth that give him his premature looks. He oughtn't to seem his age by ten years."

He eyed her archly and kindly. "Premature is a good word," said he. "Sailors are always too soon in life generally. Soon with their money, and soon with their drink and pleasures, and soon with their years, so it's soon over with them."

"They're a body of workmen I'm very sorry. for," said Mrs. Burke; "their wrongs are not understood, and they've

got no champions."

As she pronounced these words the head of a man, clothed in a Scotch cap showed in the little square of the forecastle hatch; he took a wary view of the quarter-deck, then rose into the whole body of a seaman picturesquely attired in a red shirt, blue trousers, a belt round his waist, and a knife in a sheath upon his hip. He was followed by three others, and after a short conversation they came along the decks toward us.

Captain Burke, appearing not to notice them, told his wife he was going to fetch his sextant. Mr. Green, the sour, leering mate, was trudging the weather side of the quarter-deck. The man who had first risen, the hairy one of the Scotch cap, exclaimed as the four of them came kid over the side, looking very well to a halt in the gangway:

"Can we have a word with the Capt'n, sir?"

"What d'ee want?" answered the mate, them as though he addressed some one out upon the water.

"We're come to complain that the beef to-day ain't according to the articles."

"As how?" said the mate, still talking

seawards.

"'Tain't sweet, sir."

"No call to eat of it." said the mate. turning his head and letting his leering eye droop upon them.

"That's not the way to speak," whispered Mrs. Burke to me with a note of impatience and temper. "Why shouldn't the meat be tainted? It's so in butchers' shops often enough,"

"If there's no call to eat of it there's no call to turn to on it," said one of the

men with a surly laugh.

Here Captain Burke arrived with a sextant in his hand.

"What is it, my lads?" said he quickly, but good-humoredly.

"The starboard watch's allowance of meat's gone off, sir," said the man in the Scotch cap, civilly enough.

"The fo'c'sle's dark with the smell of

it," said another.

"Notice a blue ring round the flame of the lamp?" said the captain.

"'Taint meat for men," exclaimed the man who had growled out a laugh.

"Go and bring aft what remains of it," said Captain Burke, and he stepped to the side and adjusted his sextant to get a meridional observation.

The men trudged forward. I could not but notice how eloquent of grumbling their postures were. Experience has long since assured me that no man can so perfectly make every limb and lineament of him look his grievance as the sailor.

They presently returned bearing a dish; Captain Burke stooped to it and sniffed.

"You are right," he exclaimed. "Overboard with it my lads. This should never have been served out to you. 'Tis the cook's fault to boil such offal. Mr. Green, see that the starboard watch has some canned mutton for their dinner at once."

The men emptied the contents of the pleased, and then went forward.

"'They have no champions,' my wife says," exclaimed Captain Burke to me, with a smile. "Poor fellows! But I'll speaking with half his back turned on tell you what, Miss Otway, you'll never find Jack's rights wrong for Jack not taking the trouble to make them right."

(To be continued.)



THE PASTEUR INSTITUTE.

A T the moment of my writing, everybody is talking of the discovery just made by Dr. Roux of a sure remedy for diphtheria, and that terrible scourge, croup, so dreaded by mothers. As the preparation of the vaccine requires long and expensive manipulations, and as it takes a long time to "immunize," the horses that are to furnish the serum to be used as vaccine, the Figaro has organized a public subscription to cover the expense. In a week it has reached a hundred thousand francs, a sum which to you will appear trifling, but which rather flatters our vanity, for we do not reckon in France a single one of those generous "millionaires" so common in America, we are told.

As every true journalist is bound to do, I visited the Pasteur Institute to look into the matter. When I got there, there were but four horses under treatment. They seemed quite brisk in spite of the slight wound in the neck inflicted on them. But there were an innumerable host of dogs, rabbits, guinea-pigs, and hens, waiting for the honor of being used by searchers after the secrets of health and life. The poor animals did not seem to anticipate the fate intended for them. They were in good condition and full of gaiety; their eyes shone with eagerness when the door of their cage opened; they doubtless expected to be fed, and, in fact, we took real pleasure

in distributing among them some of their favorite dainties.
"Do you never have any trouble," I asked my guide, "with the Society for the

Protection of Animals?"
"They leave us mostly in peace," he answered; "but we have more than once had

to bring to reason the Anti-Vivisection League."
"Yes," I said; "I have been told that the League is a very influential and noisy one, and that the women who belong to it are especially unreasonable and trouble-some."

"You cannot imagine how far the thing sometimes goes," he replied. "This new discovery reported to the Medical Congress of Buda-Pesth, by Dr. Roux, is not due to him alone; half a dozen savants have had a share in it and are entitled to share also in the honor of it and in the gratitude of mankind. Some of them are French, some are Germans. There is not a single Englishman among them—do you know why?"

"I have not the least idea."

"The reason is that in England the Anti-Vivisection League is all powerful. It forbids all cruelty to animals. Whenever an incision is made upon a rabbit, or a poison tried on a dog, it utters shrieks of horror and calls for aid on the public—that

good-natured public, all imagination and sentiment. Before such manifestations

savants naturally recoil."

The League is really an astounding body. It allows the cook to break a rabbit's neck, on the presumption, doubtless, that the animal prefers that mode of death, and that its ideal is to end its life in a saucepan on a bed of little onions; but it will not allow a physician to open the little beast's stomach in order to study the process of

digestion.

Its clamors have been so persistent and so loud, that in London they have prevailed. All English savants and physicians are now forbidden to practise vivisection. They have thereby been prevented from taking any share in the common work. No English name appears in the Golden Book of those benefactors of humanity who have undertaken and are carrying on the struggle against the countless legions of microbes that make war upon our human bodies. Doubtless, the Anti-Vivisection League rejoices at having saved from death so many rabbits and guinea-pigs, but has it thought that if it had everywhere been successful, neither the vaccine against rabies nor that against diphtheria would have been discovered, and that so many promising investigations that are now going on would be doomed to failure?

Granting that five or six thousand children are annually saved, is not this a considerable result? Does not the life of one child outweigh in value the lives of thousands, nay, millions of rabbits. Remember that these six thousand children are rescued from death annually during ages to come, without there being any need of new experiments and new slaughter of rabbits. So that really some five thousand rabbits have been sacrificed to save millions of human beings. I concede, if you wish, that rabbits are our brothers—inferior brothers, of course,—but between a rab-

bit and a child I do not hesitate and reserve my affection for the latter.

Needless to say, that vivisection should not be practised at haphazard; that animals should not be subjected without authentic reasons of scientific utility to sufferings that are sometimes terrible. Here, as in other things, abuse is a crime. But this cannot be charged to the Pasteur Institute, in which all studies are conducted by serious men who are in search of some truth, and experiment always intelligently. In a London institution under the control of the Medical Academy the same would be the case.

Even if abuses should at times occur, I would hesitate to join my complaints to those of the Anti-Vivisection League. In the course of the visit I paid to the Pasteur Institute, I was very much struck by a remark I heard. It was made by the doctor who was piloting me through the collections and kennels. He was speaking of some discovery made by a savant at the moment when he least expected it.

"'Twas mere chance," I said.

"Yes, chance; but in scientific discoveries, in a certain sense, everything depends on chance. It brings under the eyes of all unforeseen facts; the careless, the stupid pay no attention to these, let them go by; the man of brains, the man of genius observes, analyzes, draws conclusions that enrich science. You know the famous story of Newton who, seeing an apple fall from a tree, asked himself why it fell, instead of remaining in the air. Every text-book on physics tells of Galileo's watching the oscillations of a church chandelier, and wondering why these should come to an end. Those facts were common ones, every one had seen them, but no one had really observed them before, no one had paid close attention to them.

"Well! in the matter of microbes it is by researches, carried on more or less in the dark, in the blood, the nerves, the muscles of animals, that facts are determined which, after long remaining unnoticed, attract one day the attention of some saga-

cious observer and lead the way to some useful discovery.

"I am fond of animals; indeed, I am one of those of whom it is said they would not hurt a fly, but I believe that in questions of this kind sentiment must be controlled, one's nerves must be kept under. After all, it is not much more painful for a rabbit to succumb under the dissector's knife than under the cook's. Necessity knows no law, as the proverb has it."

I am sure the English regret not having a Pasteur Institute among them. As to

you, if you have one, I am sure it will be more richly endowed than ours. Our hundred thousand francs subscription will appear to you who lavish millions with so liberal a hand, what the Seine is to the St. Lawrence.

FRANCISOUE SARCEY.

L'INSTITUT PASTEUR

I n'est bruit à l'heure où je vous écris que de la découverte qui vient d'être faite par le docteur Roux d'un nouveau vaccin contre la diphtérie, et le croup, ce mai terrible si redouté des mères. Comme la préparation du vaccin exige de longues et coûteuses manipulations, comme il faut beaucoup de temps et de soins pour immaniser les chevaux sur lesquels on doit cueillir le sérum qui doit servir de vaccin, Le Figar» a organisé une souscription publique pour subvenir à ces frais. En huit jours elle a monié à cent mille francs, un chiffre qui vous paraîtra mesquin sans doute, mais dont nous tirous vanité, nous, qui ne conptons pas en France un seul de ces généreux milliardaires, si communs, nous dit-on, en Amerique.

J'ai à ce propos, comme le devait faire tout vrai journaliste, visité l'Institut Pasteur. Il ne s'y trouvait à ce moment là que quatre chevaux qui paraissaient fort gaillard malgré la légère blessure qu' lis portaient au cou. J'ai vu en revanche une foule innombrable de lapus, de chiens, de cobayes et de poules que l'on réservait à l'honneur de servir aux expérimentateurs, qui devalent chercher dans leurs finnes les secrets de la santé et de la vie. Ces pauvres bêtes n'avaient point l'air de se douter du sort qui les attendait. Elles étaient de bon point et gaies; et leurs yeux brillaient d'impatience quand elles voyaient s'ouvrir la porte de feur chemit; elles s'inaginaient sans doute qu'on veualt pour leur apporter à manger; et le fait est que nous primes plaisir à leur distribuer quelques menues friandises.

—Et vous n'avez jamais, denanda-je à mon guide maille à partir avec la société protectrice des animaux?

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—Et vous n'avez jamais, demandai-je à mon guide maille à partir avec la société protectrice des animaux?

—Ici, me dit il, elle nous laisse assez tranquilles; mails nous avons en plus de prine à mettre à la raison la ligue auti-vivisectionniste.

—Oui, répliquai-je, on m'a dit que cette ligue était très-puissante et très-bruyante, que les femmes qui en faisaient partie se distinguaient pas une extraordinaire et génante exaltation.

—Cela va plus loin que vous ne sauriez croire, reprii-il. Cette découverte nouvelle qui vient d'être signalée par le Docteur Roux au Congres Médical de Hudapesth, ne l'a pas pour unique auteur : une deminduzaine de savants y ont collaboré et doiveut dans la reconnaissance des hommes entrer en part de l'honneur qui lui revient. Les uns sont français, les autres sont allemans. Il n'y en a pas un seul qui soit auglais, et savez vous pourquoi?

—Je ne m'en doute mê ne pis.

—C'est qu'en Angleterre, la ligue auti-vivisectionniste est toute puissante. Elle défend qu'on fasse mal aux animaux; elle pausse des cris d'aigle et ameute le public, qui de sa nature est toute imagination et toute seu sibilité, quand on prélève sur un lapin un morceau de sa chair ou qu'en administre du poison à un chien. Ce sont des démonstrations à u'en plus fluir, des indignations à faire dresser les cheveux sur la tête. Les savants reculent devant ces auathèmes.

Cette ligue est bien étonnante, elle permet aux cuisinières de casser le cou des lapins, supposant sans doute qu'ils préférent ce geure de mort et que leur idéal est de terminer leur destinée dans une casserole, sur une couche de petits oignons. Ells ne saurait souffrir qu'un médecin leur ouvre l'estomac pour y examiner con uent la digestion s'y co aporte.

Ce qu'il y a de certain c'est qu'eille a tellement crié qu'on a fini par l'écouter à Londres. Toutes les études de vivisection ont été interdités aux médecius et aux savants anglais. Ils n'ont donc pu apporter aucune coarche à l'une de la parte de leurs nons ne figure sur le liver d'or des bienfaiteur

La ligue anti-vivisectionuiste est sans doute heureuse d'avoir sauvé de la mort tant de lapius et de cobayes. Mais a-t-elle réfléchi que si elle avait partout obtenu le même succès on n'eut trouvé ni le vaccin de la rage, ul celui de la diphtérie, ni taut d'autres que l'on expérimente à cette heure, celui de la fievre jaune, celui

ni celui de la dipitérie, ni taut d'autres que l'on expérimeute à cette heure, celui de la fievre jaune, celui du choléra.

A supposer que l'on sauve bon au mal an cinq on six mille enfants du croup, est-ce que ce résultat u'est pis de co iséquence? Bat ce qu'une vie d'enfant ne contrepèse pas des millièrs et des millions de vies de lapius? Ét remarquez que ces six mille enfants on les arrachera à la mort duranttous les siècles qui suivroit, sans qu'il soit besoin de faire de nouvelles expériences et de sacrifier d'autres lapins. En sorte qu'on aura dans la réslité, in noife ou fait souffiri quelques millièrs de lapins pour garder à la vie des millions d'êtres hu naines. Je veux bien que les lapins soient mes frères ; ou m'avouera bien en tout cas que ce sont des frères infèrieurs ; entre un lapin et un enfant, quoique tous deux soient mes frères, je n' hésite pas ; c'est pour l'enfant que je réserve ma tendresse.

Il va saus dire qu'il ne faut pas pratiquer au hasard la vivisection et soumettre sans une authentique rais nu d'utilité scientifique, les animaux à des tortures, dont quelques unes sont abominables. L'abus ici on ne partout est un d'éfaut; on ne sauraît reprocher l'abus de cette méthode à l'Institute Pesteur où toutes les études sont conduites par des hommes sérieux, qui poursuivent une vérité à découvrir et ne varient leurs expériences qu' à bon escient. Il en serait évidemment de med dans un établissement qui relèverait à Londres de l'Académie de Médecine.

Et même alors qu'il y aurait quelques abus, j'hésiterais à joindre mes plaintes aux doléances de la ligue des anti-vivisectionuistes. Au cours de cette visite que j'ai faite à l'Institut Pasteur un mon m'a beaucoup rappé. Il m'a été dit au courant de la couversation par le docteur qui s'étal cargéde me piloter à travers les collections et les chenils. Il me parlait de je ne sais quelle découverte qu'avait faite un savant au moment où il s'y attendait le moins.

—C'est un hasard, hui dis je.

—Oui un hasard, mais tout dans les découvertes scient

J'aime les bêtes et je suis de ceux dont on dit qu'ils ne feraient pas de mal à une mouche. Je crois pour-tant qu'il faut en ces sortes de questions, dompter sa sensibilité et commander à ses nerfs. Après tout il

n'est pas beaucoup plus douloureux à un lapin de périr sous le scalpel d'un médecin que sous le couteau d'une cuisinière. Nécessité fait loi, comme dit le proverbe. Je suis sûr que les Anglais regrettent de n'avoir pas chez eux un Institut Pasteur; et vous, si vous en avez un, je pense qu'il sera plus richement doté que n'est le nôtre. Nos pauvres cent mille francs de souscription vous paraîtront à vous çui prodiguez les millions d'une main si libérale, ce que la Seine est au fleuve St. Laurent.

Francisque Sarcer



T is impossible, even in these brief jottings, to pass over the regretted deaths of Dr. Holmes and of Mr. Froude. The former had given as much innocent, varied, and fruitful pleasure as any author of his long period, and Mr. Froude won readers for history even among the devotees of the newspapers. That he was an accurate student, that his statements could be depended on without verification, even such an amateur as myself has found good reason to doubt; as to his bias, it suffices to read his account of the execution of Mary Stuart. But he, of English historians, first undertook the arduous labor of examining the Spanish state papers, and, if he was partial and inaccurate, he was hardly more so than Macaulay. His personal experiences, his innate character, disabled him from fulfilling some of the first duties of a historian: his style was often incorrect and slovenly, but there was life in his work: "It has that!" as Reynolds said, and has it in such abundant measure as no other recent historical writer except Macaulay. He was not outworn, despite his seventy-six years, and his new "Erasmus" must be in the hands of all who care for the strange period of the Reformation. It may be presumed that, at Oxford, Dr. Gardiner will be Mr. Froude's academic successor; at the "breakfast table" no one can succeed the kind, learned, and witty autocrat whom we mourn.

Of new books, there are too many for one critic to keep pace with. Among novels, Mr. Haggard, in his "People of the Mist," gives us, as he says, "bare-faced and flagrant adventure." My own weakness for "huge, palpable lies" has often been regretted by compassionate critics,—in the case of "The People of the Mist," I share the frailty with at least one other contributor to The Cosmopolitan Magazine. The attack on the Slavers' Camp delights me. Otter is dear to my fancy; but the perfect calm, and easy, affable deportment of the heroine, among the most unexampled perils, is perhaps, the pearl of this light-hearted book for boys of all ages.

Adventures, lightly touched, and often not too improbable, occur in Mr. Anthony Hope's "Indiscretion of the Duchess," a capital volume to while away a journey withal. The tale is much in the "Prisoner of Zenda's" manner, which I, for one,

prefer to Mr. Hope's "Dolly Dialogues."

Shameful to say, I have not read through Mr. Hall Caine's "Manxman." It is highly praised, very widely sold, and, what is more, is recommended to me by one of the first (why not say the first?) of English lady novelists. Yet, when I had made my way through thirty pages of "The Manxman," I seemed to have been occupied with it for a very long time; and "that day I read no more." There is pretty handling of the old "witch-hare" folk-lore. I must try again, when I have real leisure.

There are two new books, at least, on and about Mr. Thomas Hardy. I would

liefer read Mr. Hardy, for myself,-this kind of thing is overdone.

Every Scotch village minister is going to describe his hamlet. We have Mr. Barrie, we have Mr. Crockett, now we have Mr. Jan Maclaren, and his "Beside the Bonnie Brier Bush." There are a good many other Scotch rural novelists in the field, "and what for no?" if people will read them? Every village has its tragedy and comedy, and the fittest literary representations of these will survive. I think those of Mr. Barrie and Mr. Crockett are likely to be the fittest, especially as Mr.

Crockett has all Galloway and Ayr for his province, not a village only.

There is too much adventure, too much of the same kind, in Mr. Stanley Weyman's "My Lady Rotha." The opening interested, the end bored me. The adventures on the roof of a house are incredible, and something of the kind was better done in the author's "House of the Wolf." Besides, the incidents, to myself, seem inadequately "motived." There are fine passages, but the book, as a whole, rather wants consistency.

Mrs. Jebb's "Life and Adventures of John Gladwyn Jebb," her late husband, is a most vivacious record of a rolling, one may say, of a rollicking stone. "Read it," is the best advice. Of the truth of the Mexican Idol adventure, I received contemporary accounts when it occurred. Few people have gone through such wild vicis-

situdes with a heart so equal to either fortune as "Jack Jebb."

ANDREW LANG.

MADONNA AND OTHER POEMS, BY HARRISON S. MORRIS.

In the merry days of yore, when the emoluments of England's poet laureate were one hundred pounds a year and a terse of "Spanish Canary wine," Mr. Morris would have filled to admiration this honorable and scantily rewarded post. "Men did not then," remarks Mr. Street, "analyze and curse their birth in corners;" and this last poet who comes to us, radiant with the joy of living, has more appetite for good-fellowship and Canary wine than for all the accumulated sorrows of our century. Beneath his complexity of form there is simplicity of essence. Pan's "gleeful and angry look" is in his eye, and his voice rings with woodland cries, with the intoxication of summer days, the careless rapture of birds, the shrill voices of the winds, the slumberous murmur of trees, the cruel exultant gladness of our mother earth. He sings, it is true, the praises of poverty; but not the pale poverty beloved by St. Francis of Assizi. Rather one suspects it to be the robust and comfortable frugality of Friar Tuck, with a mess of dried peas in the foreground, and, hidden somewhere in the cupboards, a giant pastry and the Canary wine. At times his light-hearted Epicureanism is worthy of that genial master, Thomas Love Peacock, and the frank philosophy of these two lines:

"A merry soul and a paunch well-fed, Nor man nor worm need more,"

would find its proper setting in the pages of "Headlong Hall."

But Mr. Morris has other impulses and other moods, albeit none are of a cheerless order. His is that deep content with which nature rewards her sincere worshipper, and his that brave endurance which confesses nothing to endure. There is no whispered protest against life and the evils of life, death and the terrors of death, in all these varying pages. And how many "full, vivid, instructive hours of truantry," to quote Mr. Stevenson's wholesome phrase, have embodied themselves in this charming picture of the far-off, slow-footed spring:

"Where lurked the warmth that breathes upon the wood? Where was the tender hand that guides the grass? None answers. Yet to-day they touch, and pass, And verdure creeps where you gray barrier stood. The world that shut its door and drew its hood Doffs and throws open and lifts up the glass; In at the window steals an even-mass:

The murmur of a gathering multitude.

Neither the voice of man, nor that clear throng
In all the forests of the circled earth.
Nor all the currents that can utter mirth,
Could make such unheard music. Words and song
Follow in vain. It is a wandering birth
Stolen from the center where the buds belong."

The short descriptive poems are the finest in the book. Critics of a carping turn of mind may perhaps wish that the stories had been left untold, or had been narrated in plain prose, always an admirable medium for story-telling; but "Wood-Robin," with its faint, sweet echo of Keats, and "The Lonely Bird," and "Winter," and "The Dawn of Christmas," and "Three Weeks Before Spring" are veritable transcripts from nature. Moreover, there is a charm in such truant verses as "Comrade Ease," and "Aready," which gladden us like a glint of sunshine on a gray day, suggesting vague tempting possibilities of duty deferred, and pleasure smiling idly upon tasks undone.

"Come, with open book forgot, Musing down a garden plot, Or with yawn and noonday nap, In the shady clover's lap."

How beguiling it sounds, and what a touch of happy inconsistency in the open, unread book! Pan himself might not disdain to pipe to such a singer in the warm, lazy afternoon, and to teach him the unutterable well-being of content.

AGNES REPPLIER.



HE novelists of the Ghetto are a recognized species in Germany, Hungary, Denmark, and, in fact, in every country where remnants of the Ghetto survive. Karl Emil Franzos, the author of that remarkable book, "The Jews of Barnow," Leopold Kompert, Aaron Bernstein, H. S. Mosenthal, and the Dane, Goldschmidt, have all made their fame by exposing the habits, feelings, and traditions of their people to the Gentile gaze; or, as Dr. Brandes puts it, "serving up their grand-mothers with sauce piquant." English novelists of the Ghetto have been very scarce. In fact, I can not recall one, except the subject of the present notice, Mr. I. Zangwill, whose collection of "Grotesques and Fantasies," entitled "The King of Schnorrers" is a pioneer of its kind. The stories are all comic or serio-comic, and their humor is broad, buoyant, and often farcical. Thus, when in "The Semi-Sentimental Dragon," the supe who supports the rear (it being a stage dragon) falls in love with the prima donna, and, having managed to exchange places with his colleague of the front, rises from the dead and assaults St. George for taking liberties with the rescued lady, -a funnier situation could scarcely be devised. The initial tale, which occupies nearly half the volume, is, however, the one which has the strongest claim upon our interest. It is an exceedingly droll study of the London Ghetto in the eighteenth century, and presents the virtues of the Jew, as well as his weaknesses, in an amusing light. Schnorrer, it appears, is a Jewish synonym for beggar, and the author amply justifies his assertion that "the Schnorrer is as unique among beggars as Israel is among nations."

Let me add, for the sake of a transition, that Mark Twain, whose "Puddin'-Head Wilson" I have just finished, is even more unique among humorists. Here we have a novel of the ante-bellum days in Missouri, rather melodramatic in plot, and full of the liveliest kind of action. If anybody but Mark Twain had undertaken to tell that kind of story, with exchanges of infants in the cradle, a hero with negro taint in his blood substituted for the legitimate white heir, midnight encounters in a haunted house between the false heir and his colored mother, murder by the villain of his supposed uncle and benefactor, accusation of an innocent foreigner, and final sensational acquittal and general unraveling of the tangled skein—if, I say, anybody else had had the hardihood to utilize afresh this venerable stage machinery of fiction, we should have been tempted to class his work with such cheap stuff as that of Wilkie Collins, Hugh Conway, and the dime novelists. But Mark Twain, somehow, has lifted it all into the region of literature. In the first place, the alleged extracts from Puddin'-Head Wilson's calendar are inimitably droll and witty. Take, for instance, this:

"There is no character, howsoever good and fine, but it can be destroyed by ridicule, howsoever poor and witless. Observe the ass, for instance: his character is about perfect; he is the choicest spirit among the humbler animals; yet see what ridicule has brought him to. Instead of feeling complimented, when we are called

an ass. we are left in doubt."

Then again, the Missouri village in which the scene is laid, is so vividly realized in its minutest details; and the people, in all their fatuous prejudice and stolidity, are so credible and authentic, so steeped in the local atmosphere, that the illusion becomes perfect, and we swallow the melodrama without a qualm, -exchange of heirs, haunted house, murder, and all,-and scarcely dream that we have been duped, until we wake up with a start at the end of the last chapter. "Tell the truth, or trump,-but take the trick," is one of Puddin'-Head Wilson's maxims; and the author, to make assurance doubly sure, has done both. He evidently has an ample fund of experience to draw upon; and he possesses, also, that high imaginative faculty which does not consist in crude invention, but in shaping remembered truth into logical and artistic coherence. His people stand squarely upon their feet, not because he has so constructed them, but because he has known their type and been familiar with their looks, speech, and habits. How deliciously rich, racy, and copious is, for instance, his negro talk. The very gurgling laugh and cooing cadence seem, somehow, implied in the text; and the fancy instinctively adds the vivid miens and gestures. Since Mark Twain wrote his "Tom Sawyer" and "Roughing It," he has published no book comparable in interest to "Puddin'-Head Wilson."

HJALMAR HJORTH BOYESEN.

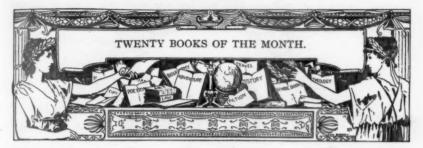


If the function of the drama be indeed to hold the mirror up to nature and show the very age and body of the time his form and pressure, then has the British drama been a notorious sluggard. The relations of our stage with reality have been limited to the topical irrelevance of the burlesque and the comic opera, wherein the inhabitants of coral strands and palm-groves clad in pinky tights, criticize the latest enactments of the House of Commons, or denounce in melodic chorus the newest

fad of the Sabbatarian Society. But a change has come over the spirit of the scene, and the things and the problems of to-day are beginning to invade the serious stage. This is a welcome sign, that the long divorce of the stage from literature is reaching its term, for no stage is really alive that does not vibrate to the multitudinous magnetism of the contemporary. Books have been the only sensitive media in which the waves of thought and emotion have found registration. Not that the topical is the highest form of art; the artist has to express his age, not his day, and it is only when contemporary humors are caught in the amber of style that the humorist has a chance of surviving the humors. Still, in the absence of dramatists who express their age, it is better that dramatists should express their day than express the day before yesterday, as they have been in the habit of doing, and it is more interesting to see our acquaintances of the drawing-room on the stage than to see the latest costumes of Bond street animated by survivals of the manners and morals of the thirties.

So stereotyped is the tradition of the stage that it takes almost half a century longer for a new type to get into a play than into a book; but the stage is picking up fast, and in exhibiting to us what is called "the new woman," it is only a year or two behind the libraries. Our trinity of playwrights has now the matter in hand. Mr. Pinero's contribution to the subject of the new sex may be dismissed as trifling in every sense of the word. His picture of "The Amazons" who were attired as men by their masculine mother, but who could not shake off their femininity, was merely intended to divert, even though there were a spice of philosophy to season the fun. More purposeful is Mr. Sydney Grundy's comedy, devoted, even in title, to "The New Woman," while the latest production of Mr. Henry Arthur Jones, "The Case of Rebellious Susan," tackles the matrimonial problem afresh in the new light, or the new darkness, thrown upon it by the alleged new demand for equality on the part of the so-called "new woman." But it cannot be said that either of these dramatists has dealt fairly by this new type. Both have taken a side, and that side-man's. Their's is cartoon humor, the one-sided humor of the fighter, not the real humor which is the smile in the eyes of wisdom. Mr. Grundy, in particular, has cultivated the crushing facetiousness of the sledge-hammer: the women who are clamoring for this or that are really in want of husbands; the "new woman" is not new but middle-aged; when a woman collaborates in a work on philosophy with a man, it is not his soul that she desires; a girl, who demands that her suitor shall have worn the white flower of a blameless life, falls into the arms of the first sinful old dotard who offers her marriage; and an energetic professional woman, who calls for a cigarette, sticks the wrong end into her mouth, and finally shows signs of mal de mer, to tickle the groundlings withal.

This is, perhaps, the most typical stroke of all in its cheap obviousness and in its proof of the dramatist's failure to realize—even when he sets himself to paint his day -that the colors have changed, and that even for a playwright some fresh observation of life is necessary. So many English ladies now smoke cigarettes that the indulgence is not even distinctive of the "new woman." That there is keen wit in Mr. Grundy's satire does not atone for its unveracity. The method of caricature is equally the device of Mr. Jones, though his main plot deals more seriously with the question of equal rights of wrong-doing in marriage. The most amusing thing about his latest comedy is that, after having outraged the proprieties to such an extent as to necessitate a defiant dedication to Mrs. Grundy (printed in the private edition of the play), the impropriety passed unperceived of the critics—with such propriety was it expressed. Mr. Jones's more intentional humor deals with the sorrows of an æsthetic philosopher married to a "new woman" who is reorganizing society. The drollery is delightful, but it is impossible to take it seriously. Satire is a great weapon for the correction of the extravagances of humanity, and it is perhaps necessary for the lords of creation to laugh at the vaporings of the revolted ladies, and to point out, ungently but firmly, that their's is a rebellion less against man than against nature; but the real "new woman" has not yet made her appearance on the boards. I. ZANGWILL.



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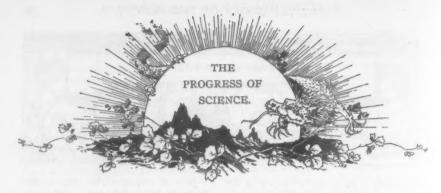
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THE ASTRONOMICAL PROGRAM FOR 1895.

THE astronomical program of the year, so far as it is a matter of prediction,

I offers nothing of exceptional rarity or interest.

The number of eclipses is somewhat larger than usual, but three of the five are only small partial eclipses of the sun, and are all invisible in the United States. The two eclipses of the moon, however, which occur on March 10th and September 3d, are both total, and are both visible in this country from beginning to end. The first of them is also observable in Europe, and will therefore afford an opportunity for coöperative observations of the occultations of small stars that lie in the moon's path while it is obscured—observations which are of great value in determining the distance of the moon and the form and size of the earth. This year, also, the moon every month passes over the Pleiades, and their occultations possess the same value if observed at widely separated stations.

The sun-spot maximum was reached two years ago, and the activity of the solar surface is now declining, so that there is no reason to look for any phenomena of

special interest in that quarter for the present.

As for the planets, Mars is already far away, and for more than a dozen years will not again be as favorably situated as he was last autumn. Saturn is far to the south, and even at his opposition in April and May will be too low down for satisfactory observation. During the first three months of the year Jupiter, on the other hand, will be admirably placed, and will monopolize the interest of observers; and during

the spring and summer Venus will be splendid in the evening sky.

The only periodic comets whose return is due this year are Encke's and Brorsen's. The former, which completes its orbit every three and a third years (the shortest comet-period known), came in sight early last November, but does not reach its perihelion until February, and is still under observation. It is very faint, seldom becoming visible to the naked eye, and the chief interest that attaches to it lies in the strange continual shortening of its period, a phenomenon which still remains without any certain explanation, though very generally supposed to be due to its collision with some invisible meteoric swarm. Brorsen's comet, which made its last visit in 1890, and has a period of five and a half years, is due again next summer; but it is unfavorably situated, and will be so faint that it may very possibly elude observation.

Of course, it is perfectly possible, and much to be desired, that some great comet may appear entirely unannounced, or that some "new star" may unexpectedly burst into brilliancy; but such phenomena do not come within the range of our

prediction.

Probably before the close of the year the immense forty-inch telescope of the Chicago University will be erected in the magnificent observatory now building for it at Lake Geneva, Wisconsin; and it is possible that by that time the great instrument now being constructed for the observatory of the Cape of Good Hope may also be mounted, so that hereafter the southern hemisphere may possess at least one instrument com-

parable in power with those that are now so numerous in the northern. And yet, after all, the real progress of astronomy depends more upon the unobtrusive, faithful, laborious work of the mathematicians and routine observers than upon big telescopes and sensational discoveries.

C. A. YOUNG.



A NEW CONSTITUENT OF THE ATMOSPHERE.

THE proportional parts of the essential constituents of the atmosphere, oxygen and nitrogen, were determined with much accuracy more than one hundred years ago. For an almost equal length of time it has been thought that these gases with three others, carbonic acid, ammonia, and water vapor, which occur in very small quantities, were the only other all-persistent components of the atmosphere, that is, components not due to local causes. It was, accordingly, to be expected that the announcement of a new constituent of the atmosphere would be received with surprise and interest. This announcement was made at the last meeting of the British Association for the Advancement of Science, in August of this year.

The suggestion of a new constituent came to Lord Rayleigh in 1893, while determining the densities of the principal gases. In these investigations he discovered that the nitrogen obtained by the decomposition of ammonia was lighter than nitrogen obtained from the air. He at first thought that this might be due to the existence of an allotropic form of nitrogen, similar to the modified form of oxygen known as ozone. By April, 1894, Lord Rayleigh had determined the density of nitrogen obtained from ammonia, from nitrous and nitric oxides, and from ammonium nitrite—and it was found to be the same in each case, but different from the density of nitrogen obtained from the atmosphere. After this result was reached, Lord Rayleigh satisfied himself that the difference could not be due to the presence of any known gas likely to be present. He then, in conjunction with Professor Ramsay, removed both the oxygen and nitrogen from a certain volume of air and found that a substance was left that was neither oxygen nor nitrogen, as was proven by its spectrum; the oxygen and nitrogen were removed from air by different processes, and in each case the new substance was left.

Since the announcement of the discovery no investigations tending to throw light on the nature and properties of the new substance have been published, and it is not known whether it is an element or a compound. According to the discoverers it constitutes about one per cent. of the atmosphere.

Professor Dewar had previously noticed that liquefied oxygen and nitrogen gave a clear liquid, while the liquefied atmosphere was turbid, and it has been suggested that this new constituent of the atmosphere may have caused the turbidity; but Professor Dewar says that the substance producing the turbidity cannot amount to one per cent. It may be confidently assumed that if there has been no mistake, the discovery will soon be verified and the properties of the new substance determined.

S. E. TILLMAN, Prof. U.S.M.A.



The ordinary transformer is an electro-magnet provided with two separate coils of wire, one containing many more turns, and finer wire than the other. An alternating current is sent through one of these coils, which is then called a primary, and this changes the polarity of the magnet as often as the direction of the current changes. The changing polarity of the magnet induces electrical currents in the other coil, which is then called a secondary, and the voltage or electrical pressure of these currents depends upon the relative number of turns of wire about the iron compared with the number in the primary, and may be made of any desirable value. A thousand volts in the primary may thus be reduced to a hundred, or to fifty, or to any other number in the secondary. Lamps may be lighted and motors run by induced currents from such a source. This system, in such common use today, was absolutely new ten years ago, and there were few electricians who considered it was a practicable scheme for utilizing electricity. When a transformer is highly loaded, that is, when it is doing as much work as it was designed to do, it is a highly efficient machine; but, when it is only partly loaded, its efficiency may fall to fifty per cent. or less. The less the load the less the efficiency of a transformer.

It has lately been discovered that the secondary coil is quite unessential for the reduction of voltage to any assignable degree; that when an alternating current is sent through the coil of a simple electro-magnet, a current sufficiently strong to magnetically saturate it, will maintain a constant voltage between the ends of the coil, and other wires attached directly to these ends and led away to lamps or motors requiring constant voltage, will act just as if they were connected to a corresponding

secondary from a transformer.

A magnet used in this way is called an impeder, for the changing magnetism impedes the current very much more than its ordinary resistance can do. A wire having a resistance of half an ohm for a continuous current, may have with an alternating current a resistance or impedance equal to several hundred ohms, but it differs radically from ordinary resistance, for it does not absorb and waste energy as the latter does. This loss of energy is measured as C°R, and for ten ampères and a hundred ohms of ordinary resistance would be 10°X100=10,000 watts, or thirteen horse-power, when, as with an impeder with but one-fourth of an ohm resistance which could give one hundred ohms impedance, the loss would be 10°X.25=25 watts. The impedance absorbing no energy is called wattless resistance.

The current needed for properly saturating an impeder capable of giving a hundred volts may be no more than half an ampère, and, after saturation, any additional current affects it but slightly, so the impeder is self-regulating, its efficiency is always high; it cannot easily be harmed by accidental currents, and considering what it accomplishes, one can hardly conceive of a simpler device. A. E. Dolbear.





"'WE MUST BE MORE CAREFUL WHERE WE GO."